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THE USE OF SULFADIAZINE AS A PROPHYLACTIC AGAINST RESPIRATORY DISEASE*

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DURING the winter season of 1942–1943, an Army Air Force technical school, located in the midwestern part of the country, experienced a severe epidemic respiratory disease. Waves of streptococcal sore throat and pneumococcal pneumonia struck the post in mid-February, 1943, and these diseases persisted at high levels until the end of May. During January, 1944, the rate for streptococcal sore throat again rose to a high level, reaching 6.0 admissions per 1000 men a week; at the same time, the incidence of lobar pneumonia rose to 3.6 admissions per 1000 men a week. It appeared that the epidemics of the previous winter were about to be repeated, and the decision was made to try the prophylactic effect of sulfadiazine.

METHOD OF INVESTIGATION

The technical school furnished an ideal population for investigation. The school is divided into two teaching shifts, each composed of approximately 5000 men. The general environment, the living conditions, the duties and even the recreations of the two groups are identical. The shifts are on different time schedules, so that mixing between the two is minimal. During the period of observation, the percentage distribution according to length of service, that according to duration of stay on the field and that according to age were calculated for each of the groups; no significant differences were found. The inflow of new troops into the groups was determined and was also found to be closely similar for the two. Finally, respiratory disease had been carefully followed in the school for many months and at all times the component units had shown a closely similar trend in disease rates.

The sulfadiazine pills were distributed by the squadron command. Each man admitted to the hospital was asked whether he had taken his pills, and numerous statements were obtained concerning how consistently the medication was being taken. It is estimated that for a given day 15 per cent of the men failed to take pills owing to having days off, being on work details or failing to cooperate. In this respect, no single squadron appeared to be worse than the others. During a three-day period following each administration of the drug, corrections were made for men admitted to the hospital who had failed to take the pills when they were supposed to, 28 such patients being dropped from the series under study.

Hospital admissions were used to score the results. Attendance at sick call was not tabulated, but estimates of its volume were obtained from dispensary officers and in all instances paralleled the experience with hospital admissions. Each patient admitted was followed on the ward until the diagnosis was established, and his chart was checked following discharge.

The cases were classified as follicular tonsillitis, lobar pneumonia, atypical pneumonia and ordinary respiratory disease. The diagnosis of follicular tonsillitis was made in the presence of pharyngeal edema with exudate. Thirty per cent of the cases were cultured. Of these, 92 per cent were positive for beta-hemolytic streptococci, 3 per cent were positive for pneumococci, and 5 per cent were negative. From this it was concluded that follicular tonsillitis was an indication of streptococcal infection. Lobar pneumonia was identified by its clinical picture and by x-ray examination. Pneumococci were typed from 75 per cent of the cases. Atypical pneumonia was distinguished by its clinical picture. The remaining cases, classed as ordinary respiratory disease, included rhinitis, pharyngitis, laryngitis and acute bronchitis.

RESULTS

Effect on total respiratory disease. Figure 1 shows the response of admissions for all types of respiratory disease to the administration of sulfadiazine. On February 2, 3 and 4, 1944, members of Teaching Shift A received 2 gm. a day. The admission rate of the group promptly fell and for ten days remained between one third and one half that of the control group. On February 18 and 19, members of Teaching Shift B received 2 gm. a day. The

*From the Army Air Force Rheumatic Fever Control Program.

decrease in the admission rate was equally striking, but the duration of the effect was more transitory, lasting only four days. On March 7, the members of Teaching Shift B began to take 1 gm. of sulfadiazine a day. On March 8 and 9, and again on March 15 and 16, the members of Teaching Shift A received 2 gm. a day. Admissions from both groups fell sharply. The rate from Teaching Shift B remained low while the men were receiving the drug daily. The rate for Teaching Shift A rose moderately five days after the second weekly treatment.

Effect on streptococcal infection. As might be expected, the most striking results were obtained with streptococcal sore throat or follicular tonsillitis (Table 1 and Figure 2). It is apparent that administration of the drug reduced the incidence of this disease almost to zero.

Likewise, the response of scarlet fever to the medication (Table 2) was striking, the admissions dropping almost to zero.

Effect on pneumococcal infection. As was pointed out above, pneumococci were typed from 75 per cent of the patients with lobar pneumonia. Thus, the effect of sulfadiazine prophylaxis or lobar pneumonia admissions may be taken as a measure of its effect on pneumococcal infection. The effect of sulfadiazine prophylaxis is shown in Table 2 and Figure 3. The experimentation period is roughly divided into intervals of two weeks. In the periods following the administration of the drug, the average daily number of admissions from the treated group fell; in the periods when no drug was given, it rose. Considering that the treatment periods included intervals when the rates were returning to pretreatment levels, the results appear to be significant. It is possible that part of this reduction was due to the control of upper respiratory disease, resulting in a lessened dissemination of pneumococci.

Sulfadiazine failed to produce any clear-cut change in the distribution pattern of the various types of

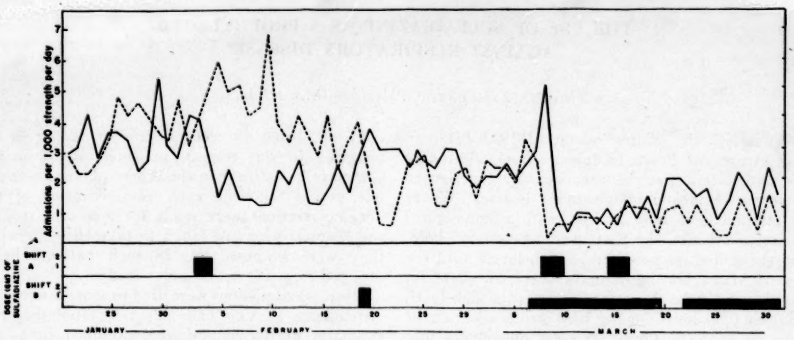

FIGURE 1. *The Effect of Sulfadiazine on the Incidence of Total Respiratory Disease. The solid line represents Shift A, and the dotted line, Shift B.*

TABLE 1. *Effect of Sulfadiazine on Admissions for Streptococcal Sore Throat.*

Time Interval	Teaching Shift A		Teaching Shift B	
	No. of Admissions	Admission Rate	No. of Admissions	Admission Rate
1/1 -1/7	11	2.5	8	1.9
1/8 -1/14	13	2.9	17	4.0
1/15-1/21	22	4.8	24	5.2
1/22-1/28	20	4.2	29	6.1
1/29-1/31	12	5.9	10	4.9
2/1 -2/3	12	6.0	18	8.9
2/4 -2/6	6	3.0	16	8.2
2/7 -2/9	2	1.0	15	7.8
2/10-2/12	4	2.0	15	7.6
2/13-2/15	8	4.1	20	9.7
2/16-2/18	7	3.4	17	8.2
2/19-2/21	17	8.1	3	1.4
2/22-2/24	11	5.3	9	4.3
2/25-2/27	13	6.2	7	3.1
2/28-3/1	12	5.8	12	5.7
3/2 -3/4	8	3.8	15	7.2
3/5-3/7	10	4.7	14	6.7
3/8 -3/10	13	5.9	3	1.4
3/11-3/13	3	1.4	0	0
3/14-3/16	3	1.4	4	1.9
3/17-3/19	1	0.5	1	0.5
3/20-3/22	5	2.3	1	0.5
3/23-3/25	8	3.6	2	1.0
3/26-3/28	5	2.3	1	0.5
3/29-3/31	8	3.6	3	1.4

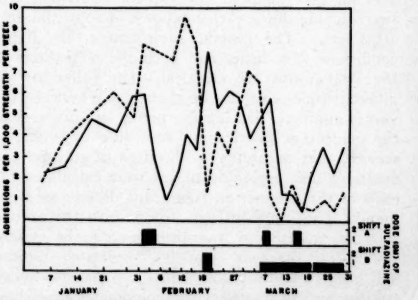

FIGURE 2. *The Effect of Sulfadiazine on the Incidence of Streptococcal Sore Throat. The solid line represents Shift A, and the dotted line, Shift B.*

pneumococci. In the ten months preceding the experiment an average of 30 per cent of the pneumococci typed were found to be Type 2. During the period of observation, this proportion rose to approximately 50 per cent. Increases in the proportion of Type 2 pneumococci could not, however, be correlated with the individual administrations of the drug.

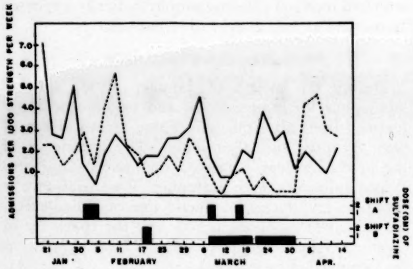

FIGURE 3. *The Effect of Sulfadiazine on the Incidence of Lobar Pneumonia.*
The solid line represents Shift A, and the dotted line, Shift B.

Effect on ordinary respiratory disease. As shown in Table 2, the admissions for ordinary respiratory disease were affected in a manner and degree quite similar to those for pneumococcal infection. It has been suspected for some time that a fair proportion of the cases with this diagnosis were in reality bacterial infections. Beta-hemolytic streptococci and epidemic types of pneumococci were isolated from a number of these patients. It is presumed that this is the explanation for the effect of sulfadiazine but extensive laboratory work would be necessary to prove this point.

Effect on atypical pneumonia. Throughout the period of observation, the incidence of primary atypical pneumonia was low, being almost exactly one third that of pneumococcal pneumonia. This corresponded to the relatively low rate for ordinary respiratory disease, it being the experience at this post that an average of 1 case of atypical pneumonia is admitted for every 10 cases of ordinary respiratory disease. The cases of atypical pneumonia were too few for significant analysis.

Effect on acute rheumatic fever. The streptococcus epidemics of streptococcal infection in 1943 and 1944 are contrasted in Figure 4. In the 1943 season, approximately eight weeks after the sharp February rise acute rheumatic fever appeared in epidemic proportions. In spite of the extremely high rates of January and February, 1944, no such outbreak of rheumatic fever appeared. This is demonstrated in Table 3, in which weekly rheumatic fever rates for the two years are compared, using the onset of the streptococcus epidemics as starting points. It should be borne in mind that although the 1944 curve of streptococcal infection appears to be continuous, it was in reality sharply broken for each group by the use of sulfadiazine (Fig. 2). It is not ideal to compare the experience of one year with that of the next, but the results just cited suggest that sulfadiazine had a prophylactic effect on the development of acute rheumatic fever.

TABLE 2. *Effect of Sulfadiazine on Admissions for the Various Respiratory Diseases.*

Disease	Time Interval	Teaching Shift A		Teaching Shift B	
		No. of Admissions	Average Admissions per Day	No. of Admissions	Average Admissions per Day
Ordinary respiratory disease.....	1/20-2/2	130	9.3	154	11.0
	2/3 -2/18	85	5.3	169	10.6
	2/19-3/7	118	6.6	88	4.9
	3/8 -3/19	46	3.8	33	2.8
	3/20-3/31	46	3.8	29	2.4
Lobar pneumonia	1/20-2/2	55	2.5	21	1.5
	2/3-2/18	22	1.4	33	2.1
	2/19-3/7	35	1.9	22	1.2
	3/8 -3/19	12	1.0	6	0.5
	3/20-3/31	27	2.2	5	0.4
Streptococcal sore throat.....	1/20-2/2	49	3.4	60	4.3
	2/3 -2/18	28	1.7	92	5.8
	2/19-3/7	84	4.7	60	3.3
	3/8 -3/19	11	0.9	7	0.6
	3/20-3/31	26	2.2	8	0.7
Scarlet fever.....	1/20-2/2	8	0.57	10	0.86
	2/3 -2/18	3	0.19	18	1.12
	2/19-3/7	12	0.67	7	0.39
	3/8 -3/19	2	0.17	0	0
	3/20-3/31	5	0.42	0	0

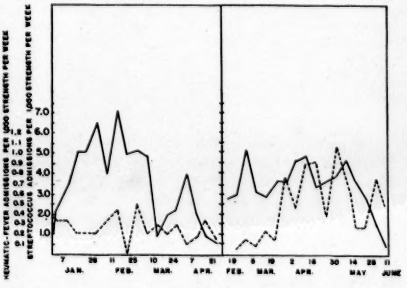

FIGURE 4. *Comparison of Incidences of Streptococcal Infection and Acute Rheumatic Fever in 1944 (left) and 1943 (right). The solid lines represent streptococcal infection and the dotted lines acute rheumatic fever.*

Dosage. The least prolonged response to sulfadiazine was obtained by the administration on February 18 and 19 of 2 gm. a day to the members of Teaching Shift B. It is suspected that the shortness of this response may have been due to a heavy saturation of this group with streptococci during the period February 2–16. The best response appeared to be from the prolonged daily administration of 1 gm. The data for March 7–19, however, indicate that there may be little to choose between this dosage and the administration of 2.0 gm. on two consecutive days once a week. It is believed that any given group represents a special problem in which a balance must be struck between economy in the use of the drug and an optimal therapeutic effect.

TABLE 3. *Comparisons of Admissions for Acute Rheumatic Fever in 1943 and 1944.*

No. of Weeks after Onset of Streptococcus Epidemic	1943		1944	
	No. of cases	Admission rate	No. of cases	Admission rate
1	0	0	3	0.34
2	1	0.07	2	0.22
3	2	0.15	2	0.21
4	1	0.08	2	0.22
5	3	0.23	3	0.33
6	2	0.15	4	0.43
7	10	0.78	0	0
8	6	0.46	5	0.51
9	12	0.90	2	0.20
10	12	0.92	3	0.30
11	5	0.38	2	0.20
12	15	1.19	3	0.30
13	10	0.76	1	0.10
14	5	0.38	2	0.18
15	5	0.38	4	0.35
16	10	0.76	3	0.25
17	6	0.46	2	0.16

Untoward reactions. No serious reaction to the drug occurred during the period of observation. There were 2 moderately severe and several minor skin reactions. No renal symptoms were reported, nor was any depression of the blood-cell counts found. Patients with pneumococcal pneumonia who had received the drug prophylactically appeared to respond as well as ever to sulfadiazine.

Summary and Conclusions

During the month of January, 1944, hospital admissions for streptococcal and pneumococcal infections from an Army Air Force technical school rose abruptly and alarmingly. The experience of the preceding year suggested that serious and prolonged epidemics were beginning. The decision was made to try the prophylactic use of sulfadiazine, the organization of the school and the character of its component troops providing an ideal population for a controlled experiment.

Administrations of sulfadiazine were made throughout the months of February and March. In each instance the results appeared to be clear cut and beneficial. The most striking effect was on beta-hemolytic streptococcus infection. It appeared that streptococcal sore throat and scarlet fever could be reduced almost to zero. There was a less marked but still significant effect on pneumococcal infection. Sixteen weeks after the onset of the epidemic of streptococcal infection the incidence of acute rheumatic fever was well below the expected rate. Ordinary respiratory disease also showed a response to the drug. This is thought to be due to the fact that streptococci and pneumococci give a clinical picture indistinguishable from that of the common cold, although this concept remains to be proved.

A variety of dosages was tried. It is believed that the optimal dosage for a given group should be worked out individually.

No serious untoward reactions occurred.

THE PREVENTION OF PULMONARY EMBOLISM*

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EVERY adult person who is confined to bed with illness — whether operative, medical, obstetric or traumatic — is a potential candidate for a pulmonary embolus. There is scarcely a physician who has not witnessed the sudden death caused when an embolus is propelled into the pulmonary artery from an unrecognized source. In such grave crises one is compelled to stand helplessly by the bedside, administering drugs futilely and almost at random in an attempt to bring the heart beat, blood pressure and respiration back to normal. Yet if preliminary observations are made and routine measures are taken, a large percentage of these deaths can be avoided.

No one knows for certain how many deaths are attributable to pulmonary embolism, but the mortality can best be appreciated if one considers the statistics of the pathologist. Barnes[1] writes:

> According to Belt, pulmonary embolism was the cause of death in 6.5 per cent of 567 consecutive cases in which necropsy was performed on adults. McCartney reviewed 14,419 cases in which necropsy was performed on persons of all ages. In 9615 of these cases the patients had been treated medically; in the remaining cases the patients had died after operation, accident or obstetric delivery. Pulmonary embolism accounted for 2.72 per cent of deaths in this series. Collins reported 2.07 per cent of deaths from pulmonary embolism of 10,940 consecutive cases in which necropsy was performed at the Los Angeles Hospital. Subject to whatever selectivity such a series of cases represent, one can estimate that 34,000 people die of pulmonary embolism yearly in the United States. If such a percentage of deaths from pulmonary embolism is applicable to the general population, and unless this expectancy can be modified, it may be assumed that more than 3,000,000 people now living in the United States will eventually die of pulmonary embolism.

Great confusion exists among physicians regarding inflammatory diseases that attack the veins of the leg. Although it is true that all these diseases may be the precursors of pulmonary embolism, two of them — namely, thrombophlebitis of varicose veins and phlegmasia alba dolens, generally known as "milk leg" — rarely give rise to fatal complications, because in these diseases the thrombus is firmly attached to the vein wall. It must be pointed out that thrombophlebitis of varicose veins is an ailment of the superficial venous circulation, and can be easily diagnosed and successfully treated by ligation and division of the great saphenous vein and all its tributaries at the fossa ovalis. The swelling and pain of phlegmasia alba dolens can be successfully treated by novocain block of the lumbar sympathetic ganglions.

The type of phlebitis known as "phlebothrombosis" is far more dangerous than either of the diseases mentioned, and carries a much higher mortality. It is this malignant complication of the deep veins of the lower leg that gives rise to the vast majority of pulmonary emboli. Here they originate, lurking in the retarded blood stream and waiting to detach themselves either in whole or in part from the venous intima. If such detachment occurs, the clot is borne along the ascending venous circulation into the right auricle, and thence into the pulmonary artery and lung. At this point, either the patient suffers nonfatal embolism that produces an infarct of the lung or, if the entire thrombus tears loose and is of sufficient caliber, the pulmonary artery is blocked and death is a matter of minutes or even seconds. This disease entity is generally unobserved by the physician, and it is his tardiness or failure in detecting it that often leads to the much-dreaded pulmonary embolus. The following case is typical.

> CASE 1. A 50-year-old, married woman was operated on for a panhysterectomy. Her recovery was seemingly uneventful until the 12th postoperative day, when she complained to the resident surgeon of pains and soreness in the left groin. When I questioned the patient, she admitted that she had noticed the pain 3 days previously in the left calf, but had not told the resident surgeon about it because she feared she would not be allowed to sit up. In the same period, the temperature and pulse had shown an unexplained rise. It should be noted that 3 critical days had elapsed since the appearance of the first symptoms.
>
> Physical examination showed definite tenderness in the muscles of the left calf, with moderate swelling of the leg and a strongly positive Homans's sign. (To test for the Homans's sign the Achilles tendon is put on stretch by forcefully flexing the foot; where the sign is present, this manipulation causes pain in the calf of the leg.) There were tenderness and swelling over the femoroiliac region, and slight cyanosis of the foot on dependency. (These constitute the classic signs and symptoms of late phlebothrombosis.) The symptoms were so obvious that venograms were not necessary.
>
> An operation was immediately performed. The left femoral vein was opened under local anesthesia and a thrombus 18 cm. long, whose proximal end was nonadherent to the femoral vein and floating in the venous circulation, was removed. The right femoral vein was also opened, but no thrombus was found. The patient became ambulatory within 24 hours and was discharged on the 6th postoperative day.

In this classic case of late phlebothrombosis, one hesitates to surmise what would have happened if the symptoms had not been recognized and traced to their deepest significance, for it is cases like this that so frequently cause fatal pulmonary embolism. Actually, there was laxness in the precautionary routine of daily examination of the legs for the very signs and symptoms that were belatedly discovered.

Judging from the above case, phlebothrombosis may be misconceived as a highly dramatic and

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easily diagnosed condition. Actually, the usual picture is quite the opposite. The early symptoms are obscure, indefinite and frequently overlooked. A considerable degree of diagnostic skill, together with routine daily examination of the lower extremities, is imperative if pulmonary embolism is to be avoided.

The following case illustrates an undramatic but undoubted case of phlebothrombosis in which we were fortunate enough to make an early diagnosis.

CASE 2. A 31-year-old multipara entered the hospital in moderate labor after an uneventful prenatal course. There was no history of varicose veins or previous phlebitis. Nine hours later she was delivered of a normal baby girl by spontaneous delivery, with a first-degree perineal laceration. The post-partum course was uneventful. The temperature and pulse remained normal for 7 days. The usual routine examination of the legs had been made each day, with no positive findings. On the 7th day, there were an unexplained temperature of 99.2°F. and a pulse of 94, accompanied by slight pain in the left calf. On surgical consultation there was moderate tenderness over the left calf muscles and a mildly positive Homans's sign. There was no swelling in the leg or cyanosis of the foot on dependency. It was suspected, however, that the patient had an early phlebothrombosis, and this was confirmed by venograms. Opening the femoral vein of the left leg revealed no thrombosis, and the usual ligation and division were performed. The right femoral vein was also opened. The postoperative course was uneventful, and the patient was discharged in 6 days.

Provided that a clot existed in the calf, the question arises whether if no femoral exploration had been made the clot would have spontaneously disappeared or would have resulted in embolus. The answer is not known but it is certain that the symptoms disappeared after the operation and that the danger of pulmonary embolism from this site was eliminated.

A patient may survive the initial embolus, but statistics prove that a second or third usually results in death. Obviously these emboli ascend from a deep phlebothrombosis. If disaster is to be avoided, either they must be surgically removed or the vein must be ligated and divided above the offending thrombus. Sometimes to get above the clot it is necessary to ligate as high as the inferior vena cava.

Occasionally a pulmonary embolus produces an infarct of the lung even before phlebothrombosis is recognized. This is a difficult diagnosis, requiring the keenest perception on the part of the physician. The following case illustrates an infarct that had been treated as pneumonia.

CASE 3. A 40-year-old man was discharged to his home from another hospital after convalescing from a supposed right lobar pneumonia. Three days after discharge he experienced a sudden sharp pain in the left side of the chest and coughed up blood. His physician diagnosed this as pneumonia in the opposite lung and put him to bed. The next day the patient experienced a severe pain in the left thigh and calf, which lasted for 17 hours. An internist was consulted and made a diagnosis of a pulmonary infarct, on the basis of the left lung and the swelling and tenderness of the right leg, together with a positive Homans's sign. The patient was taken to the Carney Hospital, where I confirmed the diagnosis of ascending phlebothrombosis of the femoral vein.

At an emergency operation the right femoral vein was found to contain a thrombus, fairly adherent to the vein wall, which was removed by instruments and suction. The left femoral vein was clear but was surgically divided routinely. The postoperative course was uneventful. The patient was out of bed within 24 hours and was discharged on the 10th hospital day. On the day before discharge x-ray examination of both lungs was negative.

There can be no reasonable doubt that this patient had developed a phlebothrombosis while lying in bed during the original illness. The correct diagnosis was completely overlooked by the patient's physician but was fortunately recognized by the consultant, who was familiar with the signs and symptoms of phlebothrombosis. Delay in operating might have resulted in a fatal embolism. There must be no waiting period after a diagnosis of phlebothrombosis has been made.

Seventy-two operations for exploration and division of the femoral vein have been performed at the Carney Hospital in the last two years, all demonstrating three cardinal lessons. The first is that phlebothrombosis usually occurs when the patient is lying in bed with the venous circulation retarded and the tone of the muscles relaxed. The second is that the diagnosis is frequently overlooked when the physician fails to make a routine examination of the lower extremities — especially the calves — during his daily ward rounds and neglects to note any unexplained slight rises in temperature and pulse. The third is that if phlebothrombosis is diagnosed, there must be no waiting period before surgical exploration of the veins. If these three principles are fully grasped, the mortality from pulmonary embolism is sure to be greatly reduced.

By this time it has become clear that pulmonary embolism rarely occurs unless some sort of phlebitis, usually phlebothrombosis, exists. The real prevention of pulmonary embolism therefore resolves itself into prevention of phlebitis. This can best be achieved by mandatory exercise of the lower legs, beginning immediately after the patient takes to his bed. It has been established that a close connection exists between the slowing up of the venous circulation and the formation of phlebothromboses. The object therefore is to accelerate the venous circulation by suitable exercises. An eminent physician has gone so far as to install bicycle pedals at the foot of the bed. This is effective but is impractical in a large hospital. The same beneficial result can be obtained by instructing the patient to simulate the pedaling motions of cycling. In my opinion a routine extension and flexing of the ankle and knee is just as effective. Something must be done to keep the venous circulation of blood at the normal rate. Under this heading come elevation of the legs in the Trendelenburg position for one hour twice daily, the use of nonconstricting abdominal dressings and routine deep-breathing exercises.

The literature clearly indicates that the maintenance of fluid balance is vitally important. This rationale is based on the fact that a dehydrated patient has a slower circulatory rate. It is imperative to keep a charted record of intake and output to maintain the fluid balance scientifically.

Since patients having varicose veins have been shown to be especially likely to develop superficial and deep phlebitis, it seems logical that if a patient has varicose veins they should be ligated, divided and injected before the fifth month of pregnancy, or prior to any elective operation. This comparatively simple treatment has been shown by many investigators to reduce the menace of pulmonary embolism. Warning must, however, be given that no varicose veins should be injected with a sclerosing solution without a preliminary ligation and division of the great saphenous vein. Failure to take this precaution has resulted in a number of deaths from pulmonary embolism.

Surgical trauma is a factor in causing phlebitis. Rough handling of tissues, leaning on the patient, especially over the femoroiliac region in abdominal operations, and poor approximation of tissues are possible contributory agents in failure to re-establish the normal venous return. For the same reason the holding of the legs is advisable in long gynecologic and obstetric operations are preferable to the use of stirrups. In addition, patients should also be out of bed and walking after a period of observation before the actual operation takes place. They should be made ambulatory by the third day after operation, especially elderly patients.

Many authorities, basing their conclusions on recent findings in biochemistry, look forward to the day when phlebitis will be prevented, or at least successfully treated, by the use of anticoagulant drugs. The medical literature is beginning to resound with claims made for heparin and dicoumarol, both of which have the significant property of preventing the formation of blood clots. Barker, Allen and Waugh[2] report a series of 479 cases at the Mayo Clinic in which dicoumarol was used to increase the prothrombin time with a view to the prevention of pulmonary embolism. I have been unable to verify these results in my cases. There are so many contraindications to the use of this drug that it is perhaps unwise at the present time for the medical profession at large to employ it in the treatment of phlebothrombosis and thrombophlebitis. It apparently caused bleeding in ten per cent of the cases at the Mayo Clinic, and it cannot be safely used on patients suffering from blood dyscrasias, jaundice, hepatic disease and kidney complications. Heparin has the same end effects as does dicoumarol and is, in addition, much more expensive. The fact that it must be administered intravenously and that bidaily coagulation times must be obtained certainly does not enhance its attractiveness for general use at the present time.

* * *

Until such time as the anticoagulants have proved themselves to be safe and inexpensive drugs, the medical profession must depend on prophylactic measures, early diagnosis and surgery for the prevention of pulmonary embolism. This is a field in which the average physician, by simple routine expedients such as those described, followed by prompt utilization of surgery, can substantially reduce the mortality in cases of pulmonary embolism.

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FRANK BURR MALLORY*

A Doctor of Physicians

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The list of former orators of this society shows that never has a pathologist been honored in this manner. The laboratory man can now feel that he has been elevated from the group of "am-nots" to that select fraternity from which orators are chosen. I am deeply appreciative that you have given me the honor of being your orator on this occasion.

Very few if any of those present have not heard of Frank Burr Mallory. I venture to say, however, that very few know him as the physician and inspiring teacher that he was, and probably very few appreciate the tremendous influence his work had in lifting the practice of medicine from the treatment of symptoms to the more effective treatment of causes.

Dr. Mallory was born on November 12, 1862, in Cleveland, Ohio. His father, George Burr Mallory, was a sailor on the Great Lakes all his life, becoming in later years captain of his ship. His mother, Anna Faragher, was born on the Isle of Man, and it was largely through her influence and perseverance that her two children went to college. Eleanor, the daughter, became a schoolteacher. She is now retired and living in Florida. Frank attended the public schools of Cleveland and matriculated at Harvard College, where he earned his way by waiting on table in the dining hall. He was graduated with an A.B. degree at twenty-four years of age. He later attained an M.A. degree there, and in 1890 he received his M.D. degree. He paid his own way at medical school also, this time by doing technical work in the Department of Histology, a circumstance that undoubtedly started his interest in stains and histologic methods.

Immediately after graduation Dr. Mallory was appointed assistant in histology and had some sort of internship at the McLean Hospital, Waverley, where, from what can be learned, he spent most of his time feeding unco-operative patients by stomach tube. He then opened an office for the practice of medicine, but became discouraged when after several months without a single patient a young woman paid him an office visit for the express purpose of having an abortion performed.[1]

In 1891 he embarked on his career. At about the same time Dr. William T. Councilman, newly selected Shattuck Professor of Pathology at the Harvard Medical School, was appointed pathologist at the Boston City Hospital. Dr. Mallory was made Dr. Councilman's assistant, both at the medical school and at the hospital.

At that time the morgue and autopsy room at the Boston City Hospital were located in the boiler room on Albany Street, and the dead patients had to be carried from the hospital on a stretcher across this busy thoroughfare. This practice became so objectionable that it was decided to move the morgue and autopsy room to the hospital grounds. The singular choice of the second floor of the laundry building was made for these rooms, and although no public streets had to be crossed, the dead bodies had to be carried up a long, winding, narrow stairway.[2] Largely through the efforts of Dr. Councilman and Dr. Mallory, the city government finally agreed to the construction of a separate laboratory and mortuary building. When completed this structure was one of the most modern in this part of the country.

Shortly after this accomplishment, Dr. Mallory was married. He took his wife, Persis McClain Tracy, of Chautauqua, New York, to Europe for a honeymoon and spent it by working a year with Chiari in Prague and Ziegler in Freiburg. On his return in 1894 he was made an instructor in pathology at Harvard.

In 1896 came a series of far-reaching events. Dr. Mallory was promoted to assistant professor of pathology at the medical school, the new laboratory building at the hospital was formally opened, he was appointed first assistant to Dr. Councilman, and his first child, Tracy Burr Mallory, was born. The previous year Dr. J. Homer Wright had come from Baltimore and had been appointed second assistant to Dr. Councilman and assistant at the medical school. Dr. Mallory formed a lifelong friendship with Dr. Wright, and the two collaborated in many scientific and literary adventures. In 1900 another significant event occurred — a second son, George Kenneth Mallory, was born. A year later Dr. Mallory became an associate professor of pathology at Harvard. Dr. Councilman resigned in 1908 as pathologist at the hospital, and Dr. Mallory was appointed to that position. He later resigned from his teaching position at Harvard but became professor of pathology in 1928. In 1932, at seventy years of age, he became professor emeritus, as well as consulting pathologist at the Boston City Hospital.

Dr. Mallory received many honors during his lifetime, a telling reflection of the world-wide reputation he had attained in medical research. A brief list of these events is presented because they

*The annual oration delivered at the one hundred and fiftieth anniversary of the Worcester District Medical Society, April 12, 1944.

†Pathologist and director of laboratories, Worcester Hahnemann Hospital and Worcester State Hospital; instructor in pathology, Boston University School of Medicine.

testify to the significance that was attached to his work. He was an active member in many national medical societies and had been a moving force in the formation of several, among which were the American Association of Pathologists and Bacteriologists and the American Association for Cancer Research. He served as president and treasurer of the American Association of Pathologists and Bacteriologists, and until 1940 was editor-in-chief of its publication, the *Journal of Medical Research*, which later became the *American Journal of Pathology*. He was also elected an honorary member of the Pathological Society of Great Britain and Ireland and a corresponding member of the Royal Medical Society of Budapest. He was awarded the Ernst gold-headed cane of the American Association of Pathologists and Bacteriologists for specially meritorious work in pathology. He was the third man to be so favored by the society, the two previous awards having gone to William H. Welch and to Theobald Smith. Tufts College and Boston University each conferred on him the honorary degree of Doctor of Science. In 1935 he received the Kober Medal from the Association of American Physicians. He lectured by invitation before medical societies in many parts of this country.

In 1933, a year after his retirement, the City of Boston honored Dr. Mallory by erecting a modern laboratory building as a memorial to his untiring work and achievements. The Mallory Institute of Pathology at the Boston City Hospital stands today as a completely equipped institution for the study of pathology and for the training of men interested in this branch of medicine.

These are the high lights in Dr. Mallory's pervasive career in medicine. Although they serve for orientation, they no more than throw a hint concerning the import of his work. For a clearer appreciation of the latter one must probe deeper and study him in his varied works and interests.

Austerity is almost a requisite in people's mental picture of a scientist, and to those who did not know Dr. Mallory he appeared to be true to type.[3] His credo was that the only way to do good work is to make that work an obsession and to avoid extracurricular activities, and since his pleasures were not such as to be related to social life, he seemed to others to live the life of an ascetic. He loved the outdoors and everything pertaining to life itself, however, — a characteristic that was probably inherited from his father. Early in life he developed an interest in botany, and nothing pleased him more than a tramp in the woods or a leisurely canoe ride when he would study the plants and flowers that he encountered. Almost every Saturday afternoon was devoted to these trips. He was a tennis enthusiast and could play a fast and scientific game. Whenever attending a match of professionals, he was more interested in their form than in the score. When increasing age interfered with strenuous activities, he continued his daily walks, even up to a few months of his death. At home the early evening was often spent playing a piano duet with the elder of his sons. Such was the simplicity of living of this great man, a simplicity that allowed him extra time for work, for study and for thought.

It must be remembered that at the time Dr. Mallory began his professional career, scientific medicine, so called, was in its infancy. Illness was treated primarily according to symptoms, and there was little knowledge regarding the cause of the symptoms. Practically nothing was known about the tissue changes occurring in disease. The work of Pasteur and Jenner was known, but Virchow, the father of modern pathology, was in the midst of his labors, Koch was in the process of discovering the tubercle bacillus, Ehrlich was yet to discover salvarsan, and bacteriology was only approaching the heyday of its morphologic phase. With the great impetus given the search for causes by the success of investigators in bacteriology, it is probable that Dr. Mallory visualized the great need for studying the cause of disease so that it could be attacked directly rather than be treated on the basis of its symptoms alone. In studying the organs of a person who had died of a disease he visualized the immense opportunity that was afforded in helping his clinical colleagues treat and cure their patients more effectively. Cellular pathology was to him the key to the cause of disease, for it was in the cells, "the building blocks," that changes all the way from health to illness should be reflected. Given the proper tools, he believed that it should be possible to view the changes wrought in the cells, and from this it should be possible to reconstruct the destructive action and treat for it. But first tools were needed — highly sensitive tools. Here it can be stated that if Dr. Mallory had accomplished no more than his work on stains and histologic technics, he would still have been a great scientist, to such a high degree of perfection did he develop them.

It is probable that Dr. Mallory's early experience in the Department of Histology, while working his way through Harvard Medical School, created his first interest in the staining and fixing of tissues. He often reiterated that the perfect stain for the perfect section would reveal the basic essentials for the study of any disease, but conversely the imperfect stain and the imperfect section could only result in false observations and false conclusions. Mallory's staining and histologic technics, brilliant in conception and results, were developed only after tedious work and exhaustive experimentation. His experiments on this subject continued throughout his career. His work at the Boston City Hospital afforded him ample opportunity for improving and perfecting these technics and for demonstrating that they were usable in a routine laboratory. The

sheer wizardry that can convert a commonplace lesion stained by ordinary methods into a thing of beauty and distinction when put through one of his specific stains for cellular substances seems like a page out of a fairy tale.[3]

Of the more important discoveries he made in this connection are differential stains for *Endameba coli*, neuroglia fibers, collagen fibers, muscle tissue and connective tissue. He also developed methods for the detection of certain metallic poisons in tissue cells.

There arose a demand for a text on pathological methods, and in 1897 Dr. Mallory collaborated with Dr. Wright to publish the first edition of the now famous *Pathological Technique*,[4] which has been the standard work on histopathology since its first appearance. It passed through eight editions and could be found on the bookshelf of almost every medical laboratory in America and Great Britain. After Dr. Wright died, it took many years before Dr. Mallory was finally persuaded to make another revision, the last edition appearing in 1938 and being dedicated to the memory of Dr. Wright. This book contains the most advanced and proved technics for fixing and staining any tissue in the human body and in any disease.

Nonetheless, to Dr. Mallory the correct preservation and staining of pathologic tissue was only a tool with which to study diseased cells. The intense urge to study the changes in tissue cells from the onset of a disease to its end drove him to persistent and tenacious work. In 1914 he published his great book, *The Principles of Pathologic Histology*,[5] the result of years of experience and study. In the preface he stated that he was dealing with pathology from the morphologic standpoint and that his aim was to present the subject biologically, first by ascertaining the cells out of which various lesions are built, and then by tracing the development of the lesions from the simplest to the most complex forms so that at the autopsy or surgical table it could be read backward with some degree of certainty. As in all his publications, the text is liberally interspersed with beautiful drawings and photomicrographs in which the histologic pictures presented leave no one in doubt concerning the entities discussed.

At the turn of the century, when photography offered an advancement in pictorial delineation, Dr. Mallory was the first to use it in his publications. Characteristically, he studied and perfected photomicrographic technic until he was an expert. From then on all his publications were illustrated by exquisite photomicrographs. Furthermore, he insisted that all papers published in the journals of which he was editor be adequately and pertinently illustrated with the best photographs obtainable. Dr. Mallory often said that good photomicrographs should represent the perfect section, the perfect stain and the perfect microscopic field. He further stated that he himself spent more time in selecting the section, the stain and the field than in writing the paper itself. Yet his sentences and phrases were also meticulously selected for simplicity and lucidity.

Mallory's hypothesis of cellular building blocks did not come out of thin air, a single case or a moment of armchair philosophy. In fact, he had an abhorrence of armchair theorists,[6] and he insisted that each pathologist should base his theories only on careful study of the given disease in its many variations. In 1895 he himself started a study of the lesions of typhoid fever that was not completed until three years later. His published findings are as much an example of his careful and tenacious work and study as they are a classic report of the tissue and cellular changes pathognomonic of the disease so widespread in that day. Since at that time photomicrography was not yet known, he enhanced the clarity and comprehensiveness of his findings by a generous use of drawings of both the gross and microscopic lesions. So definitive was his study of the pathology of this disease that any well-trained pathologist can today diagnose a case of typhoid fever post mortem even though the causative bacterium has not been isolated.

Genius has been described as the infinite capacity for taking pains.[3] Certainly Dr. Mallory's long and conclusive study of cirrhosis of the liver would qualify him as a scientist of surpassing genius even if it were the only work that typified his perseverance, the exactness of his technic and his thoroughness in exhausting all possible leads.

Cirrhosis of the liver was formerly a disease that was obscure in cause, more obscure in diagnosis and even more so in its nomenclature. Each type of cirrhosis was named after the particular writer who described a case or group of cases, and as Dr. Mallory later proved, most of these diseases were either the same type of cirrhosis or different stages of the same type. He believed that much was lost in studying the late stages of sclerotic liver disease, and hence he planned to study the onset and course. He expended more than twenty years of labor before he felt qualified to release his findings and give forth his conclusions. He first revealed that there are five distinct lesions from which cirrhosis can be derived. He then proved, with the aid of his differential stains, that hyalin is a pathognomonic finding of the liver-cell cytoplasm in so-called "alcoholic cirrhosis" of the liver. Then began his search for the cause of this type of disease.

In trying to find out whether addiction to alcohol did indeed produce cirrhosis of the liver, Dr. Mallory fed laboratory animals alcohol for many years. He finally concluded that ethyl alcohol per se is not the cause of alcoholic cirrhosis of the liver. Then followed years of painstaking work and disappointments in the search for the actual cause of this type of liver disease. Any less able man would have been

discouraged. When he believed that he could go no farther in his studies by the use of differential stains and cytologic methods alone, he resorted to animal experimentation. As new species of animal successively failed him, he tried another and still another. Finally, after nearly a quarter of a century of toil, he proved beyond all doubt that a certain type of cirrhosis of the liver can be caused by minute amounts of copper or phosphorus, but he was never able to explain satisfactorily the cause of alcoholic cirrhosis.

The abundant pathologic material from the South Department of the Boston City Hospital served as a basis for studies on the tissue changes in many contagious and infectious diseases, and it must not be supposed that Dr. Mallory neglected bacteriologic technics because of his fundamental, almost obsessive, interest in tissue studies. The bacteriologic and serologic technics used in his laboratories were the best and the most up to date, but they were used only as a means for rapid diagnosis and for proof of the etiology of the disease in which he studied the tissue changes. He contributed a chapter on the pathology of diphtheria to a book published by the Cambridge University Press, and made similar contributions on scarlet fever, measles and whooping cough. All cases coming to autopsy in his department received the same careful study and thought.

Dr. Mallory had to be sure of his ground before he published any findings. He meticulously followed all leads and considered all possibilities to determine which idea or ideas were tenable and which should be discarded. This sometimes led him into quite different byways; for example, his careful study of the cellular changes found in typhoid lesions led him to the discovery that endothelial leukocytes are phagocytic cells derived from the endothelium lining the blood vessels and vascular spaces. Although it is true that Metchnikoff's theory of phagocytes had been postulated some years before, it was from this that the true origin of Metchnikoff's macrophages was first learned, and it was from the results of his studies that Aschoff derived his concept of the reticuloendothelial system.

As the surgical removal of tissues and organs from the living body became more frequent, it was natural that Dr. Mallory spent more and more time and study on the cellular changes found in these specimens. His studies on the morphologic characteristics of neoplasms are another milestone in the advance of medical knowledge on this subject, for they resolved the confusion that was associated with neoplasms at that time. The current belief was that neoplastic cells were a sort of spontaneous and mysterious new life produced for its destruction of the host. The names attached to the various tumors found occurring in the human body were varied and meaningless, and oftener than not a hitherto unpublished tumor had the discoverer's name attached to it. It is needless to point out the chaos inherent in such a situation. It was Dr. Mallory who by his characteristic methods of study proved that the cells of any tumor are derived from one of the three embryonic layers and that they thus have a definite histologic reference. From these findings he devised a system of nomenclature for neoplasms that was based on a firm scientific foundation and that could be understood the world over. These facts are not only of academic interest but also of the utmost clinical importance, for through them all the mystery regarding the origin of neoplasms was removed and it became possible to build an equally firm system of diagnosis and treatment.

The few studies described here in more or less detail are typical examples of the many adventures of Dr. Mallory in medical research. Whereas his contributions in the field of laboratory medicine are admitted by all to have been of outstanding and far-reaching importance, he himself was more concerned that his researches have significance to the clinician. That his investigations and findings should help other physicians in treating and curing disease was ever his immediate goal. He was among the first to recognize the need for studying the causes and symptoms of disease to derive practical clinical benefit therefrom. His contributions laid the foundation for the treatment of causes rather than of symptoms alone, and as such they are one of the greatest factors in the phenomenal advance of medicine in the last thirty years. They epitomize the change from an empirical to a scientific concept of medicine.

While Dr. Mallory was the pathologist of one large hospital and the consultant pathologist of many other hospitals, he was also the unofficial consultant to a great army of pathologists and clinicians throughout the world, and his diagnosis and opinion were always given freely, after careful study, and were devoid of self-conscious authority.

Aside from all these achievements, there was one aspect of his work that to Dr. Mallory meant more than all the others put together; this was his training of pathologists. On the commemoration of his fiftieth year after graduation, he wrote in his college yearbook, "Aside from the problems of my own work, one of my greatest pleasures has been in training young men and women in pathology and in seeing what they could make out of themselves under proper encouragement and stimulation; in other words, in getting them to do their own thinking and to work out their own salvation." Graduate physicians who came to study pathology with him found Dr. Mallory the inspiring teacher par excellence. To his students he gave all he had, and he attended to their training personally.

Severe in appearance and strict in his work though he was, Dr. Mallory was intensely human. In addition to his two sons, he had an army of

adopted sons that comprised his former interns and residents. He was as much interested in these young men as he was in his offspring. He did not tolerate careless work or loose reasoning, and he did not withhold the sharp edge of his tongue when he found either. He constantly strove to instill in students his high ideals of work and study. He was interested not only in their scientific training but also in their personal lives and habits. He was never too busy to listen and to help, nor did he hesitate to administer parental reproof and advice with the typical Mallory thoroughness, usually given in the specimen storage room amid jars, crocks and the fumes of formaldehyde.[6] This was usually followed, however, by an invitation to Sunday dinner and a two-hour walk in the country. His influence on his pupils did not stop with the completion of their work in his department, nor did the mutual interest in the work of teacher and pupil cease when the latter left the department to pursue his work independently. No one of his former students ever came near Boston without stopping to see "the Chief," and Dr. Mallory was never able to hide the light and smile appearing in his eyes whenever he was visited by one of them. Once a pupil had proved his capacity to learn, study, work and think, he had in Dr. Mallory a friend for life who would help him work and fight the battles of medical knowledge, as well as those that confront everyone in life itself.

It should not be thought that Dr. Mallory was interested in and taught only postgraduate students who wanted to make pathology their life's work. He trained any and all men regardless of the specialty of medicine that they had selected, provided that they wanted to study the cause and pathogenesis of disease. Among the men he trained there are representatives of almost every specialty in the practice of medicine, and almost all of them are leaders in their field. Of the more than one hundred and fifty men whom Dr. Mallory trained personally, forty have already achieved full professorial rank, and of these nineteen are engaged in the teaching of pathology. Timothy Leary, the late George Burgess Magrath, S. Burt Wolbach, Charles F. Branch, Shields Warren, Fred Stewart, Cornelius P. Rhoads and H. Edward McMahon, as well as his two sons, Tracy and Kenneth, all trained under him. The remainder of the group of his graduates are directors either of large hospital laboratories or of research institutions.

One of the chief reasons for the success of Dr. Mallory's former pupils is the fact that he instilled into them an intensely critical attitude in accepting so-called "facts" without proof, and a keen sense of the need for proof before conclusions are drawn and theories postulated. This credo is exemplified by his remark when a former student was carrying on a bitter altercation with a third person concerning the truth of the latter's pet theory. Dr. Mallory was known to share his former pupil's belief, and the ex-student appealed to him for support. He replied: "Don't slavishly take any man's word on anything — mine least of all. Study things out for yourself and be very sure of your facts. I never found that arguing did much good. If my facts were not convincing I went to work to find others that were."[7]

That his former students revered him, and he them, is exemplified in the following instances. When he retired as editor in chief of the *American Journal of Pathology*, his former students wrote original papers for publication in one volume and dedicated it to him. On the other hand, his monumental book, *The Principles of Pathologic Histology*, Dr. Mallory dedicated to his pupils, past and present, in appreciation of the knowledge and stimulation he had received from them. Whenever a former student had finished a piece of original work, Dr. Mallory's eyes would light up in interest, and the metaphorical tap on the shoulder was an accolade to be cherished.[8]

And what did Dr. Mallory think about all this? He did not assume the appearance of the great man that he was. He had no use for pomp and ceremony and show. But he did write, "I can say that I have been able to work all my life at just what I wanted to, to make a modest but sufficient income for a comfortable living and to take a lot of pleasure out of my existence."[5]

Dr. Mallory died in Brookline on September 27, 1941, at seventy-eight years of age. Not only did he leave his two sons to carry on, but also the memorial that the City of Boston erected as a tribute to him, the Mallory Institute of Pathology, and the scores of his former pupils who have gone to the four corners of the world to carry on whatever Dr. Mallory gave them of himself; truly he was a doctor of physicians. No greater tribute has any man.

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MEDICAL PROGRESS

SULFONAMIDE THERAPY IN OTOLARYNGOLOGY

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THE purpose of this review is to present the trend of thought in regard to sulfonamide therapy as it relates to otolaryngology. As a preface to the subject, attention should be called to two contributions that are helpful in evaluating the role of chemotherapy.

In a study of the outpatient records at the Massachusetts Eye and Ear Infirmary covering the five-year period 1937–1941, Richardson[1] records the clinical course of 645 cases untreated by sulfonamides. He charts the cases according to the bacteriology found at early paracentesis and to the duration of infection of those cases that did not go on to a surgical mastoid. In the cases in which hemolytic streptococci were found, he notes that 36 per cent did not heal until the fourth, fifth or sixth week. Cases with pneumococcal infection healed in an average of twelve days. In *Staphylococcus aureus* or *Staph. albus* infection the average duration of the discharge was ten days. In this series the incidence of mastoidectomy was as follows: hemolytic streptococcus, 10 per cent; pneumococcus, 4 per cent; and staphylococcus, 5 per cent.

Dean[2] reviews the literature of otitis media historically and presents figures from early authors regarding the mortality attending otitis media in the days before modern surgery and chemotherapy. He quotes Körner, who in 1902 published statistics for Prussia at the end of the nineteenth century and stated that from birth to ten years of age only 0.22 per cent of all deaths were attributed to otitis media. In the second decade 5.15 per cent, in the third decade 3.85 per cent, in the fourth decade 1.44 per cent and above forty years 0.27 per cent were otitic deaths. Dean writes that Bezold commented that these early statistics were actually too low because the pathologist usually did not examine every ear unless his attention was drawn to it. Dean quotes Dublin, statistician of the Metropolitan Life Insurance Company, to the effect that in 1940 in the United States the ratio of deaths due to ear infection to those from all other causes was 1:337, or 0.29 per cent, which compares with Körner's average figure of 1.05 per cent for all decades. Of course, in such a comparison the decrease in infant mortality, as well as the increase in longevity for the whole population, must be taken into account.

It is important to mention these facts inasmuch as sulfonamides are now so generally used at the very onset of otitis media and in some clinics routinely, as well as preoperatively and postoperatively, that the student and the intern do not have a proper picture of otitis media as it existed prior to the introduction of chemotherapy.

Lindsay,[3] in a review of recent progress in the treatment of acute otitis media, summarizes the present-day management. He states that the most effective time for chemotherapy is in the invasive stage. He prefers sulfadiazine, and urges that the initial doses should be gauged to obtain an early concentration in the blood of 6 to 10 mg. per 100 cc. This level should be maintained for two or three days, although the time to lower the concentration should be determined by the clinical condition. He states, nevertheless, that if certain indications are present before chemotherapy the best interest for the patient demands that surgery be carried out.

Hall and Spink[4] advocate the use of sulfamerazine, and give the following directions for its administration. In adults and large children, 3 to 4 gm. is given as an initial dose, followed by 1 gm. every six hours until the temperature has been normal for forty-eight hours; then 0.5 to 1 gm. is given every eight hours and discontinued on the fifth to seventh afebrile day. In small children, 0.05 gm. per pound of body weight (the total not to exceed 4 gm.) is given initially, and treatment is continued with a dose of 0.05 gm. per pound of body weight in divided doses until the temperature is normal; then the dose is gradually reduced and is discontinued on the fifth to seventh afebrile day. In discussing the use of sulfamerazine it is stated that it is just as effective as sulfadiazine but requires smaller doses given less frequently and does not appear to be more toxic than sulfadiazine. The first point is important when it is desirable not to wake the patient for medication at night.

Ruskin[5] advocates the addition of vitamin C to sulfonamide compounds, in the form of either sulfanilamide ascorbate or sulfathiazole ascorbate, in the treatment of chronic suppuration of a wound after mastoidectomy because of the known effect of vitamin C in hastening the healing of wounds.

Kolmer,[6] in discussing the principles of treatment with sulfonamide compounds, says that the indiscriminate use of sulfonamide compounds is to be regretted because of the possibility and even the probability that the pathogenic bacteria will acquire resistance to the compounds. In using

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them for secondary bacterial infections of the common cold he quotes Spink,[7] who states that chemotherapy should not be used in this group of infections except in patients with severe infections actually caused by hemolytic streptococci; in patients who are known to have cardiac defects, with the hope of being able to forestall bacterial endocarditis, and in obstetric patients who have contracted infection of the respiratory tract at or near term. Kolmer also asserts that treatment with sulfonamide compounds is not always a short cut to control of the disease, and he quotes Porter,[8] who states that the otolaryngologist should not overlook prompt and adequate surgical measures, especially in cases in which there is pus to be drained or necrotic bone and infected thrombi to be removed. He believes that the use of sulfonamide compounds should be based on a bacteriologic diagnosis and gives the following list, in order of preference: staphylococcal infections, sulfathiazole and sulfadiazine; hemolytic streptococcus infections, sulfadiazine, sulfanilamide and azosulfamide; infections with *Streptococcus viridans*, sulfapyridine; pneumococcal infections, sulfadiazine; meningococcal infections, sulfadiazine and sulfanilamide; infections with Friedländer's bacillus, sulfadiazine and sulfapyridine; infections with *Pseudomonas pyocyaneus*, sulfanilamide and sulfathiazole; and infections with *Haemophilus influenzae*, sulfadiazine and sulfanilamide.

Much of the recent literature pertaining to the use of sulfonamides in otology is concerned with its use locally in surgical wounds. In a recent article Johnson and Spence[9] record their experiences in 44 cases of acute mastoiditis in which the patients were treated by means of primary closure of the wound after filling the cavity with sulfonamide powder. They lay great stress on the necessity for a complete exenteration of the mastoid process. Great care should be taken to remove all infected cells. The perilabyrinthine cells are removed until the horizontal semicircular canal is sharply defined. The zygomatic area is thoroughly cleaned out. In a number of cases the incus is brought into view. The mastoid cavity is then irrigated with normal saline solution, followed by thorough drying of the cavity and complete hemostasis. The cavity is then filled with sulfonamide powder. The wound is closed in two layers, more powder being dusted between the layers. In 12 cases in which one of the authors (L. F. J.) operated, there was complete healing of the postaural wound and resolution of the drum in twelve days. In another group of 8 cases operated on by various members of the hospital staff, the average postoperative stay was fourteen days. Twenty-five cases in which the mastoiditis had occurred secondary to scarlet fever had an average postoperative stay of twenty-eight days. A fourth group of 26 patients, used as a control, had an average stay of over fifty-two days, 24 of these cases being secondary to scarlet fever. It should be noted that these authors advocate a thorough surgical technic, and it seems likely that incomplete surgery, more than anything else, prolongs the healing of mastoid wounds.

Livingston[10] likewise recommends the use of sulfanilamide and sulfathiazole in postoperative mastoid cavities, but he states that in chronic cases sulfathiazole powder, although diminishing the odor and the purulent nature of the discharge, increases the discharge in quantity and that the caked powder often presents a problem. In cases of cholesteatoma the drug in no way alters the pathologic picture. Sulfonamide treatment hastens the healing in radical sinus surgery.

There is an increasing tendency to recognize the injurious effects of sulfonamide treatment. At the present time the serious effects of overdosage, such as agranulocytosis, severe anemia and renal damage, are well known. In otolaryngology there are other disadvantages. Because of the danger of sensitization nearly all authors now deprecate the use of sulfonamides for minor self-limited upper respiratory infections. It is true that during the present emergency civilians employed in essential war work have been under great pressure, particularly on the part of their employers, to remain at their work, even in the face of severe upper respiratory infection. Absenteeism has been so denounced that many people hesitate to report their illnesses. Among these the use of sulfonamide sprays, as well as the oral administration of these drugs, has been practiced.

Lessard[11] condemns the practice of those who have a tendency to give sulfonamides to patients at the slightest alarm, and cautions that should a later infection, such as meningitis or pneumonia, occur in a sensitized person, the use of sulfonamides would be impossible.

Livingston[10] states that the problems that the otolaryngologist frequently encounters are as follows: previous inadequate administration; wrong choice of drug; infection refractory to sulfonamides; difficulty of differentiating an exacerbation of the infection and symptoms due to drug toxicity; and the masking effect of sulfonamides.

Leftwich,[12] recognizing the tendency of sulfonamide drugs to produce a hypersensitive reaction, states that most attempts to demonstrate sensitivity to sulfonamides by means of skin tests have failed. His studies were made on 76 patients at Johns Hopkins Hospital from March to July, 1943. The ability of the sulfonamides to combine with the plasma proteins suggested that, attached to the plasma proteins, they may act as haptens and in this way specifically sensitize the body. He writes:

> Thinking along these lines it seems reasonable to suppose that there could be produced in the blood of the individual receiving a sulfonamide therapeutically, with an effective blood level, an antigenic substance capable

of causing sensitization in some instances, and possibly able to produce an allergic skin reaction when the serum of such an individual is injected intradermally in a person who is hypersensitive to the homologous sulfonamide. . . .

More than three hundred intradermal tests have been performed on the 76 patients studied, using forty different samples of serum as the testing agents. . . . These sera were obtained from patients suffering from some acute bacterial infection who had been treated with one or another of the drugs, whose blood cultures were negative and in whom the serologic test for syphilis was negative.

The serum was separated from the blood and placed in sterile rubber-stoppered containers, 0.5 cc. also being added to a culture medium, which was incubated for seventy-two hours as a check for sterility. The test was made by injecting intracutaneously into the flexor surface of the forearm 0.05 cc. of a control (normal) serum and 0.05 cc. each of serums from several of the patients treated with sulfonamides.

This test was found to be reliable in the diagnosis of drug sensitivity in 28 of 30 patients who had experienced definite drug reactions. It was positive in only 1 of 8 patients who were thought to be questionably sensitive clinically. In 26 patients in whom there was no evidence of sensitivity, the test was negative in 24. The 2 patients in this group who had positive tests had received sulfonamides for periods longer than six days so they may have been subclinically sensitized. Leftwich concludes that this method will show by a positive skin test whether or not a patient is sensitized to a specific sulfonamide, and also that this test is additional evidence that the drug sensitivity is an allergic reaction.

330 Dartmouth Street

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MASSACHUSETTS MEDICAL SOCIETY

PROCEEDINGS OF THE COUNCIL

Stated Meeting, October 4, 1944

A STATED meeting of the Council of the Massachusetts Medical Society was held in John Ware Hall, 8 Fenway, Boston, on Wednesday, October 4, 1944.

The meeting was called to order at 10:00 a.m. by the president, Dr. Elmer S. Bagnall, Essex North; 204 councilors were present (Appendix No. 1).

The Secretary presented the record of the meeting of the Council held on May 22, 1944, as published in the *New England Journal of Medicine*, issue of July 27, 1944.

Dr. John Homans, Suffolk, moved its acceptance and approval. This motion was seconded by Dr. Albert A. Hornor, Suffolk, and it was so ordered by vote of the Council.

Report of the Executive Committee

The Secretary, in presenting the report of the Executive Committee (Appendix No. 2), said that the committee, in the name of the Massachusetts Medical Society, had endorsed the Fifth War Loan Drive and referred a telegram from Dr. Olin West, secretary of the American Medical Association, concerning it to the Committee on Finance.

He spoke of a question that had arisen in the committee as to the legality of the Council's action in adopting one of the recommendations contained in the report of the Committee on Medical Information Bureau. This recommendation had to do with an appropriation of $2500, which was granted by the Council for the use of this committee. It was contended that the recommendation, calling for this appropriation, should have been first submitted to the Committee on Finance; failing in this, the Council should have made the appropriation contingent on its approval by this committee. The report went on to say that the committee instructed the President and Secretary to examine this situation. In the event that the appropriation had been improperly made, the President was urged to exercise his emergency powers so as to make this money available.

The report went on to say that the members of the committee were in receipt of an opinion on this matter written by the President which, in substance, stated that there was manifest evidence in the by-laws to the effect that it is the intention to have the Committee on Finance scrutinize any proposals for the expenditure of monies that are

extraordinary or other than routine. The Secretary added that the opinion also said that there is precedent for the appropriation of monies directly by the Council but that this has been contingent on the appropriation's approval by the Committee on Finance. The Secretary said that the President had exercised his emergency powers and that the money in question was available for the use of the Committee on Medical Information Bureau.

The report spoke of a request made by Mr. Powell M. Cabot, Massachusetts director of the War Manpower Commission. Mr. Cabot asked that the Massachusetts Medical Society set up machinery to aid his department similar to that set up to aid the Massachusetts director of the OPA. The report continued that this matter had been referred by the Executive Committee to the War Participation Committee, with instructions to co-operate with the Massachusetts director of the War Manpower Commission.

The report spoke of two communications that had been received on the same subject: one from the deputy surgeon general of the United States Army, Dr. George F. Lull, and the other from Lieutenant Colonel Mark C. Elworthy, chief of the Procurement Division. These communications concern a change in policy of the office of The Surgeon General whereby the Army is now commissioning certain graduates of Middlesex University School of Medicine. The conditions under which such commissions are granted are indicated in the body of the report.

The Secretary said that the committee had approved a plan submitted by the Red Cross for the training of volunteer nurse's aides in the treatment of infantile paralysis patients in the noncommunicable stage of the disease. He added that this matter had been submitted to the Committee on Public Health, which body had approved such action. He moved that the Council do likewise. This motion was seconded by Dr. David Cheever, Suffolk, and it was so ordered by vote of the Council.

Finally, the report said that the committee had reviewed the report of the Committee on Public Relations and had approved the recommendations contained therein, and certain ad interim appointments made by the President.

The Secretary moved the adoption of the report as a whole. This motion was seconded by Dr. Roy J. Heffernan, Norfolk, and it was so ordered by vote of the Council.

Reports of Standing Committees

Committee on Publications — Dr. Richard M. Smith, Suffolk, chairman.

No report.

Committee on Arrangements — Dr. Roy J. Heffernan, Norfolk, chairman.

The report, which was offered by Dr. Heffernan, is as follows:

> The Committee on Arrangements, while recognizing the advisability of holding the annual meeting of the Society in various parts of the Commonwealth, believes that, owing to wartime restrictions on travel and to the limitations of hotel accommodations that may prevail next spring, it will be best to hold the 1945 annual meeting in Boston at the Statler Hotel.
>
> It has also been thought advisable by your committee to increase the length of the meeting from two to two and a half days. To accomplish this the meeting will start on the afternoon of Tuesday, May 22, and continue through Wednesday and Thursday, May 23 and 24.
>
> The annual meeting of the Council will be held Tuesday evening, May 22.

Dr. Heffernan moved the acceptance of the report. This motion was seconded by Dr. Cheever, and it was so ordered by vote of the Council.

Committee on Ethics and Discipline — Dr. Ralph R. Stratton, Middlesex East, chairman.

No report.

Committee on Medical Education — Dr. Robert T. Monroe, Norfolk, chairman.

No report.

Committee on Membership — Dr. Harlan F. Newton, Suffolk, chairman.

No report.

Committee on Public Health — Dr. Roy J. Ward, Worcester, chairman.

The report, which was offered by Dr. Ward, is as follows:

> The Committee on Public Health has had two meetings, both during the summer months. The committee is mindful of the contributions which the Society has made to public health in the past and hopes that further contributions can be made.
>
> The first meeting was to explore the possibilities for concrete activities.
>
> The second meeting discussed at length the proposed rheumatic-fever program of the Massachusetts Department of Public Health. The department is now rewriting the plan embodying recommendations of the committee, and it will be resubmitted to the committee later. The committee believes that the Department of Public Health earnestly desires the co-operation of the Society and is making every effort toward that end.
>
> This is only a report of progress.

Dr. Ward moved the acceptance of this report. This motion was seconded by Dr. Guy L. Richardson, Essex North, and it was so ordered by vote of the Council.

Committee on Medical Defense — Dr. Arthur W. Allen, Suffolk, chairman.

No response.

Committee on Society Headquarters — Dr. J. Harper Blaisdell, Middlesex East, chairman.

Dr. Blaisdell, in offering this report, said that it contained no recommendation. He expressed the desire, however, to pass on to the Council certain information on and comments concerning the Society's headquarters. He added that the question of the site of such headquarters was a closed book

for some time, a lease between the Society and the Boston Medical Library having been signed on October 1, 1943, to cover a period of five years. He said that this lease had been signed, on the part of the Society, by Dr. Roger I. Lee, at that time the president, and by Dr. William H. Robey, at that time the chairman of the Committee on Society Headquarters. By the terms of the lease, he continued, the Society pays the sum of $6500 per year for the use of 3262 feet of floor space. It has the free use of John Ware Hall and one or two other halls including the banquet hall in the basement. He said that the rental was at the rate of $2.00 per square foot. He expressed the thought that this was a generous rent.

He said that, during the summer, his committee had met with the Committee on Medical Information Bureau and that it had been proposed to set up the bureau in a space obtained by dividing up the present quarters of the President and Secretary. He added that, inasmuch as the Information Bureau was in the nature of an experiment and space elsewhere could be provided for it at the moment, it would be better to postpone any permanent partitioning. He said that this partition would cost at least $800 and that this was another element influencing the committee's judgment.

He said that there was nothing on the outside of the building to indicate that therein was housed the headquarters of the Massachusetts Medical Society.

Finally, Dr. Blaisdell spoke of a meeting that the president, Dr. Elmer S. Bagnall, had arranged for that night with a gentleman who had just come into the service of the Massachusetts Dental Society and to which the Committee on Society Headquarters had been invited. He added that the gentleman in question is an expert on society headquarters, on publicity and on general relations between the professions, the press and the public.

The President announced that no vote on this report was necessary. He asked for a discussion of this report by way of questions or suggestions directed toward the committee. There was no response.

Committee on Finance — Dr. Francis C. Hall, Suffolk, chairman.
No response.

Committee on Industrial Health — Dr. Dwight O'Hara, Middlesex South, chairman.
No report.

REPORTS OF STATE-WIDE COMMITTEES

Committee on Legislation — Dr. Brainard F. Conley, Middlesex South, chairman.

Dr. Conley said that, inasmuch as last year was an off year in legislative matters, the committee had no report to offer.

Committee on Public Relations — Dr. Albert A. Hornor, Suffolk, secretary.

The report (Appendix No. 3) was offered by the secretary of the committee. The committee reported progress in two items: first, in the matter of better publicity for the Massachusetts Medical Society and, second, in regard to discussions held with the Massachusetts Division of Unemployment Security concerning sickness insurance for those employed in industry.

The report spoke of a discussion that had taken place between the members of the committee, representatives of the New England Roentgenological Society, the executive director of the Blue Cross, the administrator of the Waltham Hospital, the director of the Blue Cross and the president of the Massachusetts Hospital Association. This discussion concerned a proposed plan of the Blue Cross to include in the benefits offered under its contracts the sum of $15.00 toward the costs of x-ray examination that the individual policyholder might require while hospitalized. In regard to this matter two recommendations were offered by the committee: first, that the Council should not approve, at present, the proposed plan of the Blue Cross to pay $15.00 toward the costs of x-ray examinations in hospitals and, second, that discussion by the Massachusetts Hospital Service, Massachusetts Hospital Association, New England Roentgenological Society and the Committee of the Massachusetts Medical Society to Meet with the Massachusetts Hospital Association — Dr. Walter G. Phippen, chairman — should be continued.

Dr. Hornor moved the adoption of the first recommendation. This motion was seconded by Dr. Cheever, and it was so ordered by vote of the Council.

Dr. Hornor moved the adoption of the second recommendation. This motion was seconded by Dr. Richardson, and it was so ordered by vote of the Council.

Dr. Hornor moved the acceptance and adoption of the report. This motion was seconded by Dr. Henry M. Landesman, Norfolk, and it was so ordered by vote of the Council.

The President at that point called on Dr. Charles E. Mongan, senior Massachusetts delegate to the House of Delegates of the American Medical Association, to report on the proceedings of the last meeting of that body (see Appendix No. 4).

Dr. Mongan concluded his report by saying:

> Another member of our society has been called to the presidency of the American Medical Association. He is superbly equipped for the office, and well informed as to the nature of problems confronting organized medicine. He has served as member of the House of Delegates for ten years. He has been a member of the Board of Trustees for five years. He has been chairman of the Board of Trustees. He is a practicing physician, and has been president of the American College of Physicians.

Outside of the field of medicine he has been for many years one of the administrators of one of the largest universities in the United States. With such a record I think you will agree with me when I say that Dr. Roger I. Lee is eminently qualified to be the president of the American Medical Association.

The President asked Dr. Lee to stand so that all might see what he looked like. Dr. Lee arose and was greeted with loud applause.

Dr. Daniel B. Reardon, Norfolk South, asked the speaker if there is pending before Congress a bill establishing a public-health office in the Cabinet. Dr. Mongan replied in the affirmative. Dr. Reardon asked for the number of the bill. Dr. Mongan replied that he did not have the number at the moment but that he could get it. He added that the bill had been introduced by Representative Miller, of Nebraska, and that the latter is a doctor.

The President announced that Dr. Mongan's report called for no action.

Subcommittee Appointed to Meet With the Medical Advisory Committee of the Industrial Accident Board — Dr. Daniel J. Ellison, Middlesex North, chairman.

Dr. Ellison said that this subcommittee had no special report. He said that he had been appointed by Dr. Roger I. Lee, when the latter was president, a member of the general committee concerned with the conduct of the convention of the Associated Industrial Accident Boards and Commission of the United States and Canada. He added that this convention was held in Boston at the Statler Hotel in September, that it went off well and that he had enjoyed his part in it. He expressed his thanks to Dr. Lee for the assignment. (Dr. Ellison was chairman of the Reception Committee of the above event.)

Dr. Bagnall thanked Dr. Ellison for his report and called the Council's attention to an editorial and a communication from the Secretary's office that appeared in the *New England Journal of Medicine*, issue of September 28, 1944. He added that this material substantially reports the accomplishments of Dr. Ellison's committee. He urged the councilors to inform themselves on this matter.

He said that Mrs. Tousant had circularized the hospitals on the matter and that reprints of the editorial and the communication from the Secretary's Office will be sent to the chiefs-of-staff of all Massachusetts hospitals. He expressed the hope that the chiefs-of-staff will see to it that their respective members are informed with respect to these communications.

Subcommittee on Tax-Supported Medical Care — Dr. John J. Dumphy, Worcester, chairman.

The President announced that Dr. Dumphy was ill and that there would be no report from this subcommittee.

Subcommittee on Postpayment Medical Care (Bank Plan) — Dr. Daniel J. Ellison, Middlesex North, chairman.

In offering this report (Appendix No. 5), Dr. Ellison spoke as follows:

This report is presented without a meeting of the full committee having been held, and for this I sincerely apologize. Last August, Dr. Bagnall and I went to a meeting at the Parker House with a committee of the Massachusetts Bankers' Association, where Mr. McCarthy, vice-president of the National Shawmut Bank, presented this plan to the Massachusetts Bankers' Association. At that time he requested that nothing be said or done about the matter until he gave further notice of certain releases that he wanted to have made. The reason for that was that the outline or design of the brochures planned and the pamphlets and the wording of them was in process of being copyrighted, and he did not want some other organization to take this up through the publicity that might be given, and develop it prior to the receipt of the copyright. I have not heard from Mr. McCarthy, so I thought that it would be unwise to call doctors from all parts of the Commonwealth to a meeting where nothing definite could be accomplished. The meeting will, however, be held in the near future. I again apologize to the other members of the committee:

As you know, the spade work on this proposition has been ably done by our good president, Dr. Elmer S. Bagnall. The details of it have been presented at previous meetings. We are now concerned with the method of putting the plan into effect.

The original committee estimated that it would cost between $500 and $600 to put this over. Not one of us, and there were only three, had the courage to stand before the Council and ask for that sum of money. But it seems that miracles can happen, even for doctors. Mr. McCarthy got in touch with the American Bankers' Association, and was invited to meet with them in New York City, where they accepted this plan with open arms. They said that they would underwrite the entire expense of the publicity, and that they would design and draw up these brochures and pamphlets that are being passed around. So that the financial end of it is taken care of, not owing to the efforts of the committee, but to Mr. McCarthy's work.

Their plan is to start this proposition in Massachusetts. If it is successful, it will be developed in all other states of the Union. Payments will be made to the American Bankers' Association by the member banks of Massachusetts. Thus, the entire publicity will be under the care of the bankers. The doctors will be incidental in promoting this proposition.

The doctors will be visited in their offices or at such places as they wish by delegates appointed from the Association, and will be asked to join this plan. It will not be necessary for the doctors to go out among each other. However, your committee believes that it would be wise for the doctors in their district meetings to advertise the plan among each other.

The small-loans divisions of all banks in this state, as well as the small-loan companies, find that the second and third most frequent reasons given by people when applying for loans are for the payment of medical services. Obviously, a real need exists for this plan. Let it be understood that the rates charged for this plan are low, and easily explained. The charges are either added to or included in the doctor's fee.

There are two tables of rates. In the first, the charges connected with the loan are deducted, and in the second, the net plan, they are added to the note. A simple credit application is obtained, which the doctor or his secretary telephones to the bank. The facts are checked by the bank, and the doctor is notified when the note is approved. In due course the signed note is presented by the doctor to the bank for discount. To secure the doctor and the bank against loss, a reserve is set up for each account on the books at the bank in the doctor's name. The need for the reserve depends on the credit of the patient and on the doctor's practice. By agreement, the reserve may be in-

creased to cover marginal situations, although the usual reserve will be about 10 per cent.

This plan is open to all banks in Massachusetts, although it was started by the National Shawmut Bank. Some of the banks may adopt a different rate of reserve than others, and there may be a slight variation in the charge for this reserve.

This reserve, the 10 per cent having been taken out, is paid back to the doctor as payment on each account collected, unless the bank has some other charge against that particular physician, in which case the payment is credited against the other charge. As a result of the reserve feature, the term is shortened, so that the yield on the suggested rates compares closely with that of personal loans.

Whereas this has the appearance of collecting by the bank, it must be understood that the plan is in no way similar to the procedure of a collection agency. This plan is for current bills, not for the collection of bad bills. It is simply a method of making it easier for a man who eventually pays his bills to satisfy the legitimate claims of the physician, and to relieve the doctor of repeated monthly statements. It will take time for the plan to become the customary procedure. Over the years its use will expand.

Dr. George L. Schadt, Hampden, asked what was the basis on which the banks would consider a bill to be in the collection category. The President answered the question as follows:

> The banks do not believe that it would be profitable for them if doctors took their bills that are five, six or seven years old, dumped them into a basket and gave them to the banks, but I am very sure that there would be no objection if some of these old accounts were turned over. Of course, the bank investigates the credit of each signee, and they will not accept the note unless they feel that there is a probability that the signee will go through. Furthermore the doctor, of course, should not endorse the note unless he thinks that his patient will probably stand behind it.

Dr. Schadt further inquired whether or not the doctor presents his bill to the bank on the completion of his work, whereupon it is paid by the bank, or whether he has to wait one, two or three months for such payment. Dr. Ellison replied that the arrangement can be made with the patient either during or after the illness.

Dr. Donald Munro, Suffolk, asked what the bank received. Dr. Ellison replied that, on amounts under $100, the bank charges 50 cents a month.

Dr. Munro asked to whom the charge is directed. Dr. Ellison replied, "To the person who is being paid." He added that, if the doctor has a bill for $100, he can deduct $6, receiving $94 in full payment from the bank. Dr. Munro replied that in essence this was a method whereby the doctor pays the bank to collect his bills. Dr. Ellison replied: "If the doctor wants to take out the charge, he is entitled to do so. If he does not, it is added to the amount of the face of the note, and the payee pays the bank's charges, plus the amount of the note."

Dr. Munro asked how this fitted in with the prospective plans of the Blue Shield. He added that he presumed that this plan did not apply to the income group that is affected by the Blue Shield. Dr. Ellison replied that the bank plan will supplement both the Blue Cross and the Blue Shield. He added that there are certain people to whom the Blue Shield is not available and that the bank plan will serve such people.

In answer to further questioning on the part of Dr. Munro, Dr. Ellison reiterated his belief that the bank plan was complementary to the Blue Shield and not in competition with it.

Dr. Munro again emphasized the thought that, if the Society is going to play ball with a commercial organization that is obviously in the business for profit it should be clear whether or not the plan is in competition with the Blue Shield. At that point, the President observed that the plan has already been approved by the Council and that, therefore, this phase of the subject was not under discussion. Dr. Munro said that his purpose was to make clear to himself and to others certain phases of the subject that heretofore had been obscure.

Dr. George J. Connor, Essex North, asked what was the difference between this and the Morris Plan. Dr. Ellison replied that it was similar to the Morris Plan. Dr. Connor then observed that, if the doctor signs the note and the patient fails to come through, he, the doctor, is liable for the note. Dr. Ellison replied that this was the situation as he understood it.

Dr. Connor, in commenting on the statement coming from the bankers to the effect that most small loans were sought for medical purposes, said that, although such might be the reason given to the bankers by those seeking loans, the facts did not always bear this out. He spoke of two cases in his own experience wherein his bills were small and the loans sought from the Morris Plan were much more. In one instance the patient sought the additional money to finance a divorce, and in the other, to purchase an automobile.

At that point, the President said that the Massachusetts Dental Society was participating in this plan. He asked Dr. James C. McCann, president of the Massachusetts Medical Service, to discuss the relation between this plan and the Blue Shield. Dr. McCann replied as follows:

> I am not qualified to do what you ask. There are certain impressions, however, that I might convey.
>
> The first is that when the committee was working on a prepaid medical-care program, and when Dr. Bagnall was working on this program under the auspices of the Society, we were attempting to provide for the costs of medical care on a nonprofit basis. Yet we are faced with the fact that certain groups are approaching this problem on a profit basis. Whether commercial companies can accomplish more than we can remains to be seen.
>
> There is unquestionably a call for an arrangement whereby those people who have seen fit not to participate in a prepayment program can accomplish this comfortable postpayment of their bills. Whether or not they participate is often up to the industry in which they work, and not up to themselves. This plan does offer them a way to handle it on a postpayment basis.
>
> I might add that before Michigan undertook the prepayment program, they attempted a postpayment program, something of this character, on a nonprofit basis. It failed so definitely that they shifted to the prepayment basis.

The President at that point said:

I think that it must be apparent that a few of us have thought this thing through and have the right perspective on it. The committee, I am sure, will give further publicity to this matter. I understand that there is a plan in Springfield, initiated by the banks, that is operating very successfully. I have no direct information about that. There are also plans in other states, there being one in New Jersey and one in New York.

The head of the Advertising Department of the American Bankers' Association talked about this thing at the A.B.A. meeting a week or so ago, and he said that the bankers were very enthusiastic, and that they wanted the plan to be made nationwide. The Massachusetts program is a sort of pilot experiment, and the bankers think well enough of it so that they are willing to subsidize the plan.

A councilor asked who would be responsible in the event that a patient left an unpaid balance of 80 per cent. Dr. Ellison replied that the doctor would. He spoke of a man in his community who did a lot of work on venereal diseases. He added that it was the man's habit to have such patients obtain a loan from the Morris Plan Bank for $50. Immediately on the failure of the patient to pay his regular installment to the bank, treatment was stopped. Dr. Ellison said that the doctor was driven to this by the fact that such people are notorious for not paying their bills.

Dr. Ellison moved the acceptance of the report. This motion was seconded by Dr. Richardson, and it was so ordered by vote of the Council.

(During the discussion of this matter, copies of a prospectus on the above matter had been passed among the councilors.)

Subcommittee Concerned with Prepayment Medical-Care Costs Insurance — Dr. James C. McCann, Worcester, chairman.

This report (Appendix No. 6) was offered by Dr. McCann. Dr. McCann moved that the Committee Concerned with Prepayment Medical-Care Costs Insurance, having completed its work, be discharged. This motion was seconded by Dr. Walter H. Pulsifer, Plymouth.

Dr. Allen G. Rice, Hampden, moved as an amendment that the original motion carry with it the thanks of the Council. This amendment being acceptable to the maker and seconder, it was declared by the President to be part of the original motion. It was so ordered by vote of the Council. (Dr. McCann was the recipient of loud applause as he left the platform.)

Reports of Special Committees

Committee on Cancer — Dr. George A. Moore, Plymouth, chairman.

No report.

Committee on War Participation — Dr. Guy L. Richardson, Essex North, chairman.

Dr. Richardson reported as follows:

This year's work of the War Participation Committee had barely started when the report reached us of the death of Dr. William B. Breed, the first chairman of the committee. We had supposed his resignation had been sent in to lighten his efforts and to enable him to convalesce more quickly and that he would soon be back among us. Such was not to be the case, and our deliberations opened with the knowledge that the Council had lost a devoted and tireless worker.

It was apparent from the material Dr. Breed sent to me that he and his committee had done a prodigious amount of work. The records were carefully kept and catalogued and delivered to me in splendid shape.

So far as possible all projects undertaken or under discussion had been completed or decided. We were able to start afresh, and that was of particular help to Dr. Harold Giddings and myself, the two new members of the committee.

The first project that came to us was a request from the state office of the War Manpower Commission to assist them in drawing up a standard certificate form for a physician to sign whenever an applicant wished to change his job because of his health. The Commission thought that some doctors were too easily prevailed on by their patients to sign these certificates and that they were not careful to ascertain whether or not the old job really was detrimental to the applicant's health. Doctors too readily accepted their patients' statements about the health menace when the real reason for wanting to change jobs was to make more money or to work nearer home. As a result of this certificate abuse the work of the Commission in the war effort was being seriously interfered with. The following is an example of a case of apparent abuse: A dye worker presented a physician's certificate that his work was injurious to his health. Request to change employment was denied by the Commission. The worker then returned to the dye house and asked for his old job back. The employer refused because of the doctor's certificate stating that dye house work was injurious to that employee. The next day the worker returned with a statement from the same doctor to the effect that he had been completely cured and could safely resume his regular duties in the dye house.

The committee jumped into this project, believing it was what we were set up for. We advised a short certificate form and helped shorten it. If there is anything a physician hates to see pushed at him these days, it is a long questionnaire to answer and sign. We agreed to review the medical aspects of any doctor's certificate that the War Manpower Commission was uncertain about. Believing that the certificate abuse would be greatly lessened if doctors were fully informed of the harm caused by job jumping, space was given us in the August 3 issue of the *Journal* to depict the certificate form and to explain the whole matter.

It is gratifying here to reaffirm an earlier impression — that Massachusetts physicians will co-operate in any plan for the public good if the reason therefor is made plain to them. Thus far the committee has been asked to review *not one* of these new certificates. I should like to see that record maintained.

Let me quote from a letter to me under the date of September 18 and signed by Powell M. Cabot, state director of the War Manpower Commission: "In general, the opinion throughout the State is that this form has been of considerable value and has definitely corrected the situation which existed prior to its use."

The next appeal for aid came from the War Food Administration. Fats were scarce and were expected to become more so. Heavy cream prescriptions were being given out too freely by physicians. The purpose of the directive on heavy cream was thereby being defeated. The committee promptly assisted the War Food Administration to get the desired publicity. Through the local war-participation committees in all sections of the Commonwealth, we attempted to get full information to doctors and public as to the need for conservation of heavy cream, and to familiarize them with the opinions of the expert committees of the American Medical Association to the effect that heavy cream is rarely a necessity in medical treatment. We hoped this would lessen patients' applications for prescriptions and assist physicians in refusing to give them.

It has been estimated that the number of heavy-cream prescriptions coming in to the War Food Administration decreased more than 50 per cent after this publicity, and each succeeding week the decrease continues. The credit

for this remarkable showing belongs to Mr. John H. Sullivan, district supervisor of the War Food Administration, and his medical advisory committee, composed of some of our most respected physicians. They furnish the teeth for this act, and no amount of publicity in this instance is comparable to the effect of their decisions. It is a thankless job and gets them a lot of abuse. They are doing it with courage and fairness. I urge you to give them your support.

Another question brought before the War Participation Committee was the adequacy of hospital care for emergency cases in the largest cities of the Commonwealth — Boston, Springfield and Worcester. It was agreed that, in the smaller communities, no such problem existed. It was voted to send a letter to each of the major hospitals in those cities, asking how often in the last year it was necessary, for any reason, to refuse admission to an emergency case — either private or ward. These letters, forty-two in all, went out September 22, and already half the hospitals have replied. From a hasty reading of the answers, it appears that most of those hospitals never refuse admission of an emergency case. Some admitted having to turn away a few patients because of lack of beds or personnel. A complete report on this question will be made to the Council at a later date.

Dr. Richardson moved the acceptance of the report. This motion was seconded by Dr. Connor, and it was so ordered by vote of the Council.

Committee on Rehabilitation — Dr. William E. Browne, Suffolk, chairman.

Dr. Browne read into the record two letters. The first, which he had addressed to Dean A. Clark, Surgeon (R), United States Public Health Service, Physical Rehabilitation Section, Office of Vocational Rehabilitation, Washington, D. C., reads as follows:

Dear Dr. Clark:

I believe the date was April 26 of this year, I had the privilege as a member of the Boston Hospital Council of listening to your very worthwhile explanation of a program, not at that time completed, which had to do with rehabilitation.

You, no doubt, are well aware of some of the activities of the Massachusetts Medical Society. Perhaps when it was one hundred and fifty years old you read the late Harvey Cushing's paper concerning the Society and his paper was entitled "From Tallow Dip to Television." All during the years of its existence, as is the story with other state societies, its members have always tried to be of benefit and help to our citizens.

We have a committee of rehabilitation in the Massachusetts Medical Society. Pursuant to a communication from you dated February 5, 1944, our committee had a very pleasant dinner meeting with a representative of the Department of Rehabilitation of this Commonwealth acting under the direction of the Department of Education. Recently we received a query from the American Medical Association (a form query I assume), asking us what we had done and what we proposed to do in this matter of rehabilitation. Our reply was that twice since Wednesday, April 5, 1944, we had been in communication with the director of rehabilitation of the State, and each time had been informed, in substance, that committees in the various counties of the state were about to be set up, but up to now the Department of Rehabilitation in the state had not been ready to avail itself of any help which might be extended to it and which it really wanted from the physicians in the state and particularly the members of the Massachusetts Medical Society. On Monday, November 15, 1943, we communicated with the powers that be in Washington and asked whether or no it would be helpful to have two members from each of the district county medical societies in the state communicate with the Department of Rehabilitation for whatever assistance we might be in this matter of rehabilitation. We were informed that no definite program was at that time in operation.

Would you please consider this communication to you a personal one and in no sense going over the head of the director of rehabilitation in this state who is a very worthwhile individual. Busy though you may be, could you let our committee on rehabilitation know whether or not any state medical society in our country is at present functioning actively in any rehabilitation program approved by you and your department? Secondly, would you let me know if we are correct in assuming that we may not be of any service to the Department of Rehabilitation in our state or in the country as a whole until we are asked to be of assistance by those in charge of this program?

Sincerely yours,
William E. Browne

Dr. Clark's reply is as follows:

Dear Dr. Browne:

Thank you very much for your personal letter of August 30, which I found upon my return from a field trip.

The interest of the Rehabilitation Committee of the Massachusetts Medical Society in the expanded vocational rehabilitation program is very gratifying. There are a few facts about the development of this program which may be of interest to you.

You will recall that the Barden-LaFollette Act, Public Law 113 (78th Congress), was enacted by the Congress in July, 1943. The Office of Vocational Rehabilitation was established in the fall of last year and in January, 1944, the staff of the Physical Restoration Section was appointed by arrangement with the Surgeon General of the United States Public Health Service for the assignment of medical officers. The appointment of a national Professional Advisory Committee and the formulation of federal requirements and recommendations for physical restoration services in the state programs were the major activities of this section during the first portion of the year. These requirements and recommendations were considered at the meeting of the committee on March 3 and 4, 1944, and were issued as a section of the *Manual of Policies* to all state vocational rehabilitation agencies and state agencies for the blind on April 24, 1944.

The physical restoration aspects of the program constitute an entirely new activity for almost all the states and require considerable interpretation and assistance to state officials by the regional representatives and technical consultants of this office. The first installment of the physical restoration amendments to state plans, dealing with the administrative organization and qualifications for administrative personnel for the physical restoration unit, was due in this office on July 1, 1944. The second installment of the physical restoration amendments to state plans, dealing with the general criteria to be followed in the provision of physical restoration services, medical diagnosis, scope of physical restoration services, standards for physicians and other professional personnel, and rates of payment to hospitals will be due in this office on January 1, 1945. The complete operation of the physical restoration phases of the vocational rehabilitation program probably will be in effect in most states by July 1, 1945.

In the light of these facts, the inauguration of physical restoration services by state agencies will require some additional time before the necessary administrative staffs are recruited and policies established. In order to qualify for federal grants-in-aid the state agencies are urged to secure competent technical advice through advisory committees. It is recommended by the federal office that such committees be appointed by the state agencies after consultation with appropriate professional groups and that they include physicians representing the principal specialties of medicine concerned with rehabilitation and representatives of public health, hospital administration, nursing, medical social work, physical therapy and occupational therapy. The medical specialties particularly stressed are orthopedics, tuberculosis, psychiatry, ophthalmology, otology and so forth. On the basis of information thus far received practically all state medical societies have indicated their willingness to co-operate and in many instances have suggested physicians for the state professional advisory committees. I am sure the officials of the Massachusetts rehabilitation agencies are looking forward to the valuable assistance which can be rendered by your committee in conducting the physical restoration program, and I am, therefore, sending copies of this letter to Mr. Irwin Ristine, regional representative, Mr. Herbert A. Dallas, director, Division of Vocational Rehabilitation for Massachusetts,

and Mr. Arthur Sullivan, director, Massachusetts Division for the Blind.

I hope that I shall have an opportunity of discussing the rehabilitation program with you at some future date during a visit to Massachusetts.

Very truly yours,
DEAN A. CLARK, Surgeon (R), U.S.P.H.S.

Dr. Browne moved that the Council approve this correspondence. This motion was seconded by Dr. Hornor, and it was so ordered by vote of the Council.

Dr. Browne endeavored to impress the Council with the importance of keeping up to date on this matter, saying that some day this is going to be a big problem and that he did not want it said at some future time that the Government had tried to get medical societies to do the right thing and finally had to do it itself.

Dr. Browne moved that his report be accepted as a report of progress. This motion was seconded by Dr. Hornor, and it was so ordered by vote of the Council.

Committee on Postwar Loan Fund — Dr. George Leonard Schadt, Hampden, chairman.

Dr. Schadt spoke as follows:

The committee has no formal report at this time. It is merely a brief informal report to say that the committee, through its various members, is appearing before the different districts during the next month or two, and then early in November we will get the questionnaire out suggested by the Council at its last meeting. We hope that every member will return that questionnaire postcard promptly so that we may know how the Society as a whole feels on this plan.

The President expressed the thought that no action by the Council on the report was necessary.

Military Postgraduate Committee — Dr. W. Richard Ohler, Norfolk, chairman.

Dr. Ohler reported as follows:

This will be a very brief report. Since the annual meeting the work of the committee has progressed as usual, with no letup during the summer months. Since October, 1943, when the Massachusetts Medical Society committee joined forces with representatives from other state societies in New England, and with representatives from the American Medical Association, the College of Physicians and the College of Surgeons, to organize what is now known as the New England Committee for Wartime Graduate Medical Meetings, two hundred and nine such meetings have been given in twenty-one Army, Navy and Coast Guard installations in the New England area by a group of one hundred and sixty-nine instructors.

As a mark of appreciation for the work done by the various instructors, the First Naval District tendered a dinner to all instructors throughout New England at the Chelsea Naval Hospital on September 25. Needless to state, the occasion was very much appreciated by all who have given of their time to make this program a success.

Since our last report, this committee has lost the services of Dr. William B. Breed. In this particular effort, as in any work or endeavor in which Dr. Breed had a part, we miss his wise counsel, his enthusiastic support and, beyond all else, his great friendliness and human understanding.

Dr. Ohler moved the acceptance of the report. This motion was seconded by Dr. Merrill C. Sosman, Suffolk, and it was so ordered by vote of the Council.

Medical Advisory Committee to Regional OPA — Dr. Joseph Garland, Suffolk, chairman.

Dr. Garland reported as follows:

The problem of determining extra ration allotments on certificates of patients' necessity continues to be a vexing one. Point values shift frequently and difficulties are often encountered in obtaining unrationed foods. Thus, with the individual still receiving 7½ red points weekly, the point value of butter has jumped to 20 points per pound, and, although many types of meat are off the ration list, they cannot always be found on the counters, although in this respect it is worth mentioning that only 29 per cent of all the meat in the country at this time is rationed. Many persons, moreover, are still apparently unable or unwilling to adjust themselves to the use of fats and meats of low or no point value.

To these facts, and to the new regulation that local boards are allowed to issue extra points for diabetes and active tuberculosis only, may be attributed the increased rate at which applications are coming to the regional office — 815 in the first twenty days of September. It seems apparent to the committee that many more certificates are being submitted than is justified on the basis of the facts in individual cases, which again brings up the problem of publicity and education for both the public and physicians. As the need for food rationing continues, — and there seems to be no immediate prospect of its coming to an end, — this education should be brought about by an increased reliance on local advisory committees — perhaps in most instances the local war-participation committees already in existence. Committees have been formed this summer in Scituate and Brockton, and others are scheduled for Lawrence, New Bedford, Springfield, Worcester and Pittsfield. The policy will be extended as the need arises.

Advisory committees are now functioning in Connecticut, New Hampshire and Maine, in addition to Rhode Island, which has helped somewhat in lightening the labors of the Massachusetts committee.

When new restrictions on the prescription of heavy cream were imposed on August 1, this committee was incorporated into a new and larger advisory committee to aid the War Food Administration.

Dr. Garland moved the acceptance of the report as one of progress. This motion was seconded by Dr. Richardson, and it was so ordered by vote of the Council.

The President solicited the support of the subcommittees that have or will be appointed under this program. He added that it was important to demonstrate the Society's capacity and willingness to participate in these emergency matters to the end that we may not later be criticized for holding out against or opposing any of the governmental program.

Committee on Medical Information Bureau — Dr. Walter G. Phippen, Essex South, chairman.

Dr. Phippen reported as follows:

This is simply a report of progress. The telephone has been installed in the room across the corridor from Dr. Tighe's office. We are in process of hiring an operator. We are holding a meeting on Wednesday afternoon, October 25, at 4:00 p.m., to which are invited representatives of all the hospitals in Greater Boston to discuss the technical operation of the Bureau, and we hope to have it in operation soon. It will be listed in the telephone directory under Massachusetts Medical Society, Clinical Information. Unfortunately the telephone company allows only two words so the word "Bureau" must be eliminated.

Dr. Phippen moved that the report be accepted as one of progress. This motion was seconded by Dr. Cheever, and it was so ordered by vote of the Council.

Committee on Postgraduate Instruction — Dr. W. Richard Ohler, Norfolk, chairman.

No report.

Committee on Physical Therapy — Dr. Arthur L. Watkins, Middlesex South, chairman.

The report, which was offered by Dr. Watkins, is as follows:

> This committee has functioned chiefly with the aim of increasing the use of physical therapy by general practitioners. To accomplish this purpose a paper discussing physical therapy in general practice has been published in the *Journal* and monthly symposiums have been given in service hospitals in connection with the wartime graduate medical meetings.

Dr. Watkins moved the acceptance of the report as one of progress. This motion was seconded by Dr. Hornor, and it was so ordered by vote of the Council.

Committee on Expert Testimony — Dr. Frank R. Ober, Suffolk, chairman.

This report (Appendix No. 7) was offered by Dr. Ober.

Dr. Ober moved the acceptance of the report. This motion was seconded by Dr. Phippen, and it was so ordered by vote of the Council.

Dr. Ober moved the adoption of the following recommendations contained in the report:

> 1. That a standing committee of five or more, to be called the Committee on Medicolegal Problems, be appointed by the president.
> 2. That the by-laws of the Massachusetts Medical Society be amended to provide for such a body.

This motion was seconded by Dr. Schadt.

Dr. Rice expressed the wish to hear some debate concerning the necessity of establishing another standing committee. He added that the Committee on Ethics and Discipline had had only two such cases and that this committee is not overburdened.

Dr. Reginald Fitz asked if these recommendations did not imply a change in the by-laws and, if that was so, if some special action was not required.

The President replied that such was embodied in the second recommendation.

Dr. Carl Bearse, Norfolk, said that the matter of creating a standing committee deserved serious consideration. He added that questions concerning medical expert testimony are now being taken up by many other state medical societies. He stated that Michigan and Connecticut are working on a plan at the present time and that California has a plan, which goes in for education along these lines, there being a panel of physicians who talk to lawyers on the medical aspect of expert testimony. He said that he had noted recently that there were 4000 malpractice suits in the country each year. He added that this problem was coming up constantly and that it was his opinion that the problem could best be met by the creation of a standing committee.

Dr. Hornor asked:

> Is it the intention that this committee will serve to offer a panel, or the equivalent of a panel, to judges so that the judges will know whether the man who is testifying, be he a neurologist, largyngologist or orthopedist, really knows something about his specialty? It seems to me that what we need is prevention of poor testimony rather than the disciplining of people who have testified poorly.
>
> I think that we need to help the judges and the courts to know whom they want to testify before them. And if that would be a part of the work of this committee, I should be much in favor of it.

Dr. Ober, in reply to Dr. Hornor, said that his committee did not consider that it was its function to discuss how this should be done. He continued as follows:

> We thought that that should be left to a standing committee, and that that standing committee should not proceed overnight to try to reform the whole procedure of expert testimony. Your scheme, however, is a part of it.
>
> Now there may be some objection to the panel system, and perhaps we should not get into an argument about that now. That should come up as a report of the standing committee. We hope to submit a by-law that will cover the duties of the standing committee, and that by-law should be discussed when presented. I do not believe that this is the day to present the by-law. This committee should be instructed to present a by-law on the functions of such a standing committee, similar to the by-laws that describe the functions of other standing committees.
>
> There are a great many matters that have to be considered in this thing. First, there is the bad medical witness, and there is the court testifier who goes around testifying as an expert in all sorts of things. There is the question of rules of procedure in the courts, and the question of subpoenas, having a constable come into your office and serve you with a subpoena as an ordinary witness, and you get down there to the court and find you are going to be qualified as an expert witness, and that does not seem to be quite fair to some of us. Then there is the question of one doctor testifying against another. So there are a great many aspects of this thing that cannot be settled by the Committee on Ethics and Discipline.
>
> The Committee on Ethics and Discipline is a court, as I see it, to settle many problems of this nature. The Committee on Medical Defense, of which Dr. Allen is chairman, has, of course, headed off a great many suits for malpractice, but we believe, in addition, that there is an educational aspect. Every doctor should be informed concerning what constitutes malpractice and concerning proper conduct toward his patient, so that he does not interfere with the code of ethics of the American Medical Association and the code that we have adopted and so that he will not tell some patient, "Well, so-and-so just treated you rottenly." We should like to stop all that.
>
> We believe that such a committee has a special job to do, and that this legal thing is in its infancy. It has not been changed in the last five hundred years, and with a standing committee that has a constant function, — and the standing committee should be changed so that new blood would be instilled into it every so often, — we think that the Society would get farther in straightening out some of the bad expert testimony that is going on.
>
> The Briggs Law has done a tremendous amount of good to straighten out testimony in criminal cases in which the problem of insanity arises, and it has cut out a lot of poor expert testimony. Some of you, perhaps many of you, will remember what happened in the Thaw case a great many years ago. We do not have that in Massachusetts.

Dr. Schadt spoke as a former chairman of the special committee. In replying to Dr. Hornor's

question, he said that he and his committee had in mind the question of setting up a panel at that time. He said that he had discussed this with certain representatives of the Massachusetts Bar Association and that they were sympathetic. He added that the importance of this committee is great and that a committee of this kind could do great work.

Dr. Munro spoke as follows:

There is no question but that this is a tremendously important problem. I should like to emphasize what Dr. Hornor has said and what Dr. Schadt has said, and what Dr. Ober has also emphasized. This problem is so intimately bound up with the law of testimony and the power of the courts to declare a man expert or not expert on what seems to the medical profession to be inadequate evidence, that I think that the Society should consider very carefully the advisability of obtaining active co-operation from the Massachusetts Bar Association before committing itself to the creation of a standing committee.

Now I do not mean that a standing committee should not be created. I think a standing committee should eventually be created, just as Dr. Ober suggests, but to create a standing committee means that certain rules, procedures and duties must be outlined, also as he requests.

It does not seem wise to me for the Society to go off the deep end at this moment, and create such an important committee, until it knows very well what the rules and procedures and functions of that committee are going to be, and those cannot be known, I believe, until the active co-operation of the Massachusetts Bar Association is obtained.

I should think that it would be very much more to the purpose to have this thing handled during this formative period by the special committee, and then when all organizations and the Massachusetts Bar Association have co-operated, as I am sure they will, a standing committee could be formed with rules and duties and methods of procedure that would fit the case as it actually exists, and not as it was thought to exist.

Dr. Charles C. Lund, Suffolk, spoke as follows:

The question before the house is whether or not we should create a standing committee.

It seems to me that Dr. Ober's report has not given us quite enough information to make a decision at this time. To decide whether we should have a permanent committee rather than a temporary one, I think we should know from Dr. Ober, first, what he has done, second, what his problems are and, third, why those problems cannot be solved by the present committee. I probably should be in favor of a standing committee because I know that this subject is important and because I want to see everything done by the Society that can be done to keep medical testimony on the highest plane.

Dr. Cheever arose to say that he thought he might clarify some of the issues. He spoke as follows:

Almost everything that has been said was brought up in our committee, and we considered it very carefully, and our committee is not at all convinced or sure of how much we can accomplish.

Now there are a number of interesting things to remember. Obviously, there are three major parties to this situation. There is the judiciary; there are the lawyers; and there are the doctors. The judiciary, of course, constitutes the entire organization of the courts. You will be perhaps rather surprised to know that there are ten thousand practicing lawyers in the state but that only fifteen hundred of them belong to the Massachusetts Bar Association. Only two thousand of them belong to the Boston Bar Association. It is perfectly evident, then, that eight thousand of the ten thousand practicing lawyers in Massachusetts are outside the jurisdiction of any agreement that those two bar associations might make. That is a very unfortunate situation.

Dr. Hornor's question about the panel was something that we considered carefully and thought that we could not possibly decide. It seems to me almost impossible that a panel of the members of the Massachusetts Medical Society could be arranged and constituted and accepted by the judiciary and accepted by the lawyers in connection with these cases.

We consulted with the secretaries of the bar associations and learned an interesting fact: there is a movement on foot to integrate both these bar associations and all the lawyers in the state into a single association. And if that can be done, it is obvious, I should suppose, that their rulings and decisions would have to be observed by all the lawyers of the Commonwealth. When that is done, we could proceed with more certainty of some success.

There is another thing that I should like to emphasize in connection with what Dr. Rice said, and that is that it would seem, having read a little editorial note in the *Journal* some weeks ago, as though it were not generally known how adequately the Committee on Ethics and Discipline in the past has handled this situation.

We have always had — I can personally testify for twenty years — a Committee on Ethics and Discipline that has been glad to receive complaints about unmoral medical expert testimony, that has considered those cases and that, in a good many instances, has disciplined the offender even to the extent of securing his resignation from the Society. So that if you will read the statement about the Minnesota Bar Association, you will find that what they are congratulating themselves about is an arrangement precisely similar to that, so far as I can see, that has always obtained here. So we are not so very far behind.

It did seem to this committee, of which I am a member, that the Society as a whole is sufficiently informed about the functioning of the Committee on Ethics and Discipline in these cases. Of course, we can inform it, but it seemed to us that the creation of a new standing committee would serve as a means of so informing the Society, and bringing the matter more acutely into the foreground. And it was our belief and intention that this new committee would organize the work, would sift the cases as the evidence was presented, and present to the Committee on Ethics and Discipline for final adjudication the issues involving the question of disciplining an offender. That is about as far as we were able to go.

Dr. Browne observed that the litigant in dealing with the subject must not be forgotten, for without him there would be no case. He thought it would be questionable whether or not a panel would work out. He said that it was discretionary with the judge whether or not the individual doctor could qualify as an expert. He added that judges exercise this discretionary power in various ways. Dr. Browne expressed himself as feeling that it might be wise to refer this matter to the Executive Committee. Reverting to the matter of a panel, he thought such might be a valuable thing if one of the panel were to listen to medical testimony offered in court. He finally concluded with the thought that he was quite sure that a standing committee will ultimately be a necessary and helpful thing for the Society. He questioned, however, the wisdom of doing this without further deliberation.

Dr. Schadt was recognized by the chair. He referred to the remarks made by Dr. Rice and said that the work of this committee should be to educate doctors, both members and nonmembers of the Society, so that they may become good witnesses to the end that they may never have cause to appear before the Committee on Ethics and Discipline. He concluded by saying that he thought

that this would be a valuable committee for the Society.

Dr. Stratton expressed himself as favoring such a committee, particularly its educational function. He did not, however, think that a standing committee should be created until such time as the special committee brought into the Council a definite program with which the Massachusetts Bar Association concurs. He added that, when and if such a situation was realized, the Committee on Ethics and Discipline would be relieved of a tremendous amount of work usually associated with assembling the facts in any given case.

Dr. Ober expressed the thought that the Society was not going to get anything out of the lawyers until it had done something itself. He spoke as follows:

> Under the prevailing system of trial by jury or before a judge the conduct of a lawsuit is a bilateral contest to see which side will win. In the procedure of producing direct testimony, everything favorable to the client is presented, and on cross-examination everything may be done to discredit or destroy that testimony. Too often the debate is emotionalized and dramatized by one side or the other, in order to influence the jury. Therefore, it would seem in the interests of justice that some other method of considering expert testimony might be worked out which would be superior to our present system.

He concluded that this would be one of the main functions of this standing committee.

At that point the recommendations of the committee were restated. Then, they were adopted by a standing vote of the Council.

The Secretary arose to say that the adoption of the recommendations did not constitute a formal amendment to the by-laws and that, if such an amendment were to be acted on at the annual meeting in 1945, it must be offered at this meeting or at the meeting in February.

The President asked if anyone was prepared to introduce a formal amendment.

Dr. Bearse moved that Chapter VII of the by-laws be amended by adding Section 16, to read as follows:

> The Committee on Medicolegal Problems shall consist of five fellows. It may appoint auxiliary members. It shall concern itself with medicolegal problems.

This motion was seconded by Dr. Lester M. Felton, Worcester.

Dr. William A. R. Chapin, Hampden, moved that this matter be laid on the table. He said that he had made this motion because he thought standing committees were something to think about and because he did not believe that amendments to the by-laws were done orderly when devised in two minutes. Dr. Chapin's motion was seconded by Dr. Munro, and it was so ordered by vote of the Council.

Committee on Automobile Insurance Claims — Dr. Henry C. Marble, Suffolk, chairman.

In connection with the above committee, the President made the following statement:

> The question arises whether or not to continue this committee. The committee has made no report, and it is the opinion of the President and the Secretary that a committee that makes no reports should not be carried on the rolls year after year. If there is no objection from the Council, this committee will be declared discharged, with thanks, because they did a good piece of work in organizing a plan for the direct payment to physicians by a gentleman's agreement with the insurance companies.
>
> Do I hear any objection?

There was no response.

Committee to Study the Practice of Medicine by Unregistered Persons — Dr. Richard Dutton, Middlesex East, chairman.

Dr. Dutton said his committee had no report. He moved that the committee be discharged; the President added "with thanks," he being mindful of the applause with which this committee's report had been received several years previously. This motion was seconded by Dr. Conley, and it was so ordered by vote of the Council.

Committee to Meet with the Massachusetts Hospital Association — Dr. Walter G. Phippen, Essex South, chairman.

No report.

Committee on Maternal Welfare — Dr. Raymond S. Titus, Norfolk, chairman.

No report.

Appointments

The President made the following nominations:

Auditing Committee:

Dr. Z William Colson, Essex North, chairman.
Dr. David G. Cogan, Middlesex South.

To the Council:

Dr. Matthew J. Bachulus, Hampden, replacing Dr. Edward A. Knowlton, resigned.
Dr. Joseph A. Daley, Middlesex South, replacing Dr. John J. Cochran, deceased.
Dr. Kenneth J. Tillotson, Middlesex South, replacing Dr. Sumner H. Remick, a member *ex officio*.
Dr. Abraham Myerson, Norfolk, replacing Dr. Roy J. Heffernan, a member *ex officio*.
Dr. James J. Regan, Suffolk, replacing Dr. Reginald Fitz, a member *ex officio*.
Dr. John Homans, Suffolk (this district was entitled to one more councilor).
Dr. Theodore L. Story, Worcester, replacing Dr. Roy J. Ward, a member *ex officio*.
Dr. W. Richard Ohler, Norfolk, replacing Dr. Edward L. Kickham, deceased.

To the Committee on Public Health:

Dr. Conrad Wesselhoeft, replacing Dr. Roger I. Lee, resigned.

To the Committee on Postgraduate Instruction:

Dr. W. Richard Ohler, replacing Dr. Reginald Fitz as chairman.

To the Committee on Maternal Welfare:

Dr. Raymond S. Titus, *chairman*, replacing Dr. Louis E. Phaneuf, resigned.
Dr. Benjamin deF. Lambert.
Dr. Ralph E. Cole.

To the Committee on Postpayment Medical Care:
Dr. Daniel B. Reardon, replacing Dr. Walter L. Sargent, resigned.

To the Medical Advisory Committee to Regional OPA:
Dr. Loring Grimes.

To the Committee on Nominations:
Dr. Harry F. Byrnes, alternate member from Hampden District, replacing Dr. Edward A. Knowlton, resigned.

To the Board of Censors, Norfolk District:
Dr. H. Allan Novack, replacing Dr. Saul Berman, deceased.

Representative to the Massachusetts Central Health Council:
Dr. James W. Bunce, Berkshire, replacing Dr. Robert J. Carpenter, resigned.

Voting Member in Massachusetts Hospital Service, Incorporated:
Dr. Albert A. Hornor, replacing Dr. William B. Breed, deceased.

Representative on the Massachusetts Nursing Council for War Service:
Dr. David D. Scannell.

The President asked if there were any nominations from the floor. There being no response, Dr. Chapin moved the approval of the nominations. This motion was seconded by Dr. John B. Hall, Norfolk, and it was so ordered by vote of the Council.

New Business

The President read the obituaries of three former councilors.

DR. WILLIAM B. BREED, of Newton, died August 21, 1944. He was in his fifty-second year.

Dr. Breed received his degree from Harvard Medical School in 1920. He had been a member of the Council since June, 1929, and nominating councilor since 1939. At the time of his death he was a member of the Committee on Publications, having been appointed to that committee in February, 1940, and a voting member in Massachusetts Hospital Service, Incorporated. He was a member of the Board of Censors of Suffolk District from 1933 to 1937 and was supervising censor from 1937 to 1938. He was formerly chairman of the Committee on War Participation and a member of the Committee on Prepayment Medical-Care Costs Insurance and the Committee on Legislation. He was associate editor of the *Journal* from 1923 to 1937 and a member of its editorial staff from 1937 to 1942.

He had been secretary-treasurer of the National Committee for Wartime Graduate Medical Meetings since its organization in the summer of 1943.

Dr. Breed was a staff member at the Massachusetts General Hospital and an associate in medicine at Harvard Medical School. He was also a member of the American Medical Association, the American College of Physicians, the New England Heart Association and the American Clinical and Climatological Society.

His widow and three children survive.

DR. EDWARD L. KICKHAM, of Brookline, died August 10, 1944. He was in his forty-ninth year.

Dr. Kickham received his degree from Tufts College Medical School in 1923. He has been a member of the Council since 1937 and, at the time of his death, was a member of the Massachusetts Committee of the Procurement and Assignment Service. He was a member of the Board of Censors of Norfolk District from 1936 to 1939 and was supervising censor from 1939 to 1940.

He was a member of the obstetric and gynecologic staffs of the Carney Hospital and St. Elizabeth's Hospital, having been associated with the former since 1924 and with the latter since 1930. He had been instructor in gynecology at Tufts College Medical School since 1930.

Dr. Kickham was a fellow of the American College of Surgeons and the New England Obstetrical and Gynecological Society and a member of the American Medical Association, the American Board of Obstetrics and Gynecology and the Boston Obstetrical Society. He was treasurer of St. Luke's Guild of Boston.

His widow, two brothers and a sister survive.

DR. CHARLES A. SPARROW, of Worcester, died September 20, 1944. He was in his sixty-first year.

Dr. Sparrow was born in Marion and graduated from Amherst College in 1906, receiving his degree from Harvard Medical School in 1909. He had been a member of the Council since 1938. He was a member of the Committee on Public Relations from 1939 to 1943. He was an associate editor of the *Worcester Medical News*, a publication of the Worcester District Medical Society, as well as a past president of that society.

He was appointed to the staff of the Memorial Hospital in 1916 and in 1925 became head of the Pediatric Clinic there.

Dr. Sparrow perfected, as chief of the Medical Division of the Massachusetts Committee on Public Safety in Worcester, arrangements for the work of doctors, nurses and ambulances in case of enemy air activity.

He was a member of the American Academy of Pediatrics and of the New England Pediatric Society.

His widow, a son, a daughter and a sister survive.

The President asked the councilors to stand for one minute in silent tribute to these men.

The Secretary read the following excerpt from Chapter V, Section 1, of the by-laws:

> The censors of the several district societies shall meet for the examination of applicants semiannually on the first Thursday in May and on the first Thursday in December.

He referred to the Council a membership certificate that had come from a district medical society in which the censors' examination had been held on October 6, 1943. He spoke of having written the district society and of having received a reply to the effect that the doctors in the district were extremely busy. Dr. William D. Kinney, Barnstable, said that he had been present at the May meeting when this examination had been started and that, owing to an emergency, the examination had to be discontinued and was not completed until October. Dr. Kinney moved that this candidate be admitted to the privileges of membership in the Massachusetts Medical Society. This motion was seconded by Dr. Henry W. Godfrey, Middlesex South, who expressed it as his feeling that this candidate, having started his examination at the proper time, should be admitted as of that date. It was so ordered by vote of the Council.

Dr. Allen G. Rice, Hampden, asked who sets the hour of the Council meetings. The President referred this question to the Secretary, who replied that the Council itself sets the hour of its meetings.

Dr. Rice pointed out how difficult it was for councilors from Springfield and points farther west to arrive on time for a 10:00 o'clock meeting. He said that, as it is now, such councilors must leave Pittsfield around 5:00 o'clock in the morning and Springfield at 6:45. He added that, if the hour of meeting were changed to 10:30 a.m., councilors could leave Springfield at 8:00 a.m. and arrive at the meeting on time. Dr. Rice made a motion to

that effect. This motion was seconded by Dr. William Dameshek, Norfolk, and it was so ordered by vote of the Council.

Dr. Dameshek moved that the Council set up a committee for the consideration of transfusions and blood grouping. This motion was seconded by Dr. Hornor.

In support of this motion, Dr. Dameshek spoke as follows:

> I think all of us will agree that transfusions and blood grouping technics have come to the foreground a great deal in recent years. Furthermore, there has been the great expansion of blood banking, the Rh factor has been discovered and so forth. The number of transfusions has increased, and a great many reactions, sometimes fatal, have occurred. I happen to have seen a number of them in the past several years in the various parts of the Commonwealth. So I am beginning to believe more and more that there should be a committee of the Society to consider transfusions, standardization of the methods, the training of technical help doing the transfusions, the various agglutination tests, the Rh factor, transfusion reactions and so forth. This committee could gather information, it seems to me, of great importance to the members of the Massachusetts Medical Society, and could perhaps standardize procedures in various hospitals. I think that it is important for the Massachusetts Medical Society to do this first, before the Massachusetts Department of Public Health takes it over.

He said that it was his idea that this committee should be appointed by the President and that he was willing to leave the number of members to serve on it to the same authority.

Dr. Schadt asked whether such a committee would set up rules and regulations for community hospitals, private hospitals, private laboratories and physicians. Dr. Dameshek said that he was in the process of writing a letter to the editor of the *Journal* and that he would take up Dr. Schadt's question in that letter. He added, however, that he did not have it in mind that this committee should supervise the business of transfusions in hospitals and laboratories but rather that it should gather material and data on this subject and disseminate the information so obtained.

He went on to say that a great many blood groupings have been done with faulty serum, that a great many blood groupings are being done by incompetent personnel, that there are a great many reactions due to incompatibility that has not been properly checked, that the patient has not been watched properly during the administration of the first 50 to 100 cc., that too many transfusions of whole blood are now being given, that at times the typing and cross-matching procedures are not properly checked and that whole blood is frequently given while the patient is under a general or spinal anesthetic, the patient under such circumstances not having the full possession of his senses or his sensibilities. He expressed the thought that the standardization of the whole procedure might well be a function of the committee.

Dr. Lund said that he did not see how this committee could be of particular benefit or why a committee should be set up in this and not in other fields. He concluded by saying that it seemed to him that the answer to Dr. Dameshek's problem was for him to do a little study, write a paper and publish it in the *Journal*.

Dr. Hornor said that, when he seconded this motion, he visualized that there were many members of the Massachusetts Medical Society who were capable of gathering and sifting this information and disseminating it for the benefit of the rest. He said that the Committee on Maternal Welfare was a precedent for the action proposed.

The motion to establish such a committee was defeated by vote of the Council.

Dr. Alexander A. Levi, Middlesex South, was recognized by the chair. He read Section 2(*b*), of Chapter V, of the by-laws as follows:

> The secretary of a district society shall receive an application from a graduate of a discontinued medical school, a foreign medical school or any medical school not approved by the Council only when:
>
> The applicant has possessed a license to practice medicine in the United States or its territories for at least five years. . . .

He offered as an amendment to this section the following:

> The applicant has possessed a license to practice medicine in the United States or its territories for at least five years, termination of the elapsed time to be based on the date of the next censors' meeting. . . .

This amendment was seconded by Dr. Hyman Morrison, Norfolk.

Dr. Levi went on to say that, under the present by-law, the applicant covered by Section 2 (*b*), of Chapter V, might actually have been in practice five and a half years before he became eligible to apply for membership. He said that he would like to see this situation changed so that the five years would be calculated as running from the time of licensure to the date of the censors' examination. He added that if his amendment prevailed an applicant could apply in the regular manner on or before September 15 provided his waiting period of five years would be over before the censors' examination was scheduled to take place in the following December.

The Secretary said he knew the situation that Dr. Levi had in mind to change. He felt, however, that the language of the amendment, as submitted, could be improved on so that its meaning would be clearer and unmistakable.

On a vote by the Council, the motion to amend the by-laws was lost.

Dr. Chapin was recognized by the chair. He made the following motion:

> That the President of the Massachusetts Medical Society be instructed to use such means as he sees fit to investigate and report to the next meeting of the Executive Committee the question of the young returned medical officer assigned to duty in the military hospital versus the medical officer already established there but suitable for overseas service.

This motion was seconded by Dr. Conley.

In supporting his motion, Dr. Chapin said he had written a letter to the Secretary on this matter. He spoke of two young doctors who had returned from overseas and who had been assigned to a base hospital on limited service. He complained that these young men are not given the type of work they are trained to do. He added that the Commanding Officer of this hospital has an excellent setup but that the officers he has trained might well be suitable for overseas service, which would permit more advantageous placement of returned officers.

Dr. Lund thought it would be embarrassing for the Society to make any move in the way of asking the Army to look into the special cases of young men who are not getting the kind of work they like. Dr. Chapin said that what he desired was that these returned officers be used to some purpose and that they be made to feel that they are doing good medicine again.

At that point in the discussion, the President said that he would be very much confused about his duties as outlined in this motion. He said that he was a little in doubt how and where he should proceed to get the information for the Council. He added, however, that it was the President's duty to do what the Council asks him to do.

On a vote by the Council, the motion was lost.

Dr. Hornor moved that the Council adjourn. This motion was seconded by Dr. Lund, and it was so ordered by vote of the Council.

The President declared the Council adjourned at 2:00 p.m.

MICHAEL A. TIGHE, *Secretary*

APPENDIX NO. 1

ATTENDANCE OF COUNCILORS

BERKSHIRE

I. S. F. Dodd
C. F. Kernan
Solomon Schwager
P. J. Sullivan

BRISTOL NORTH

W. H. Allen
J. H. Brewster
R. M. Chambers
W. J. Morse
J. L. Murphy
W. M. Stobbs

BRISTOL SOUTH

G. W. Blood
R. B. Butler
E. D. Gardner
P. E. Truesdale

ESSEX NORTH

E. S. Bagnall
R. V. Baketel
J. T. Batal
G. J. Connor
Elizabeth Councilman
E. H. Ganley
H. R. Kurth
P. J. Look
R. C. Norris
G. L. Richardson
F. W. Snow
C. F. Warren

ESSEX SOUTH

Bernard Appel
H. A. Boyle
D. S. Clark
Loring Grimes
P. P. Johnson
B. B. Mansfield
W. G. Phippen
E. D. Reynolds
H. D. Stebbins
P. E. Tivnan
J. W. Trask
C. F. Twomey
C. A. Worthen

FRANKLIN

H. M. Kemp

HAMPDEN

E. P. Bagg
M. J. Bachulus
W. A. R. Chapin
A. J. Douglas
J. E. Dwyer
Frederic Hagler
A. G. Rice
G. L. Schadt
J. A. Seaman

HAMPSHIRE

W. M. Dobson

MIDDLESEX EAST

J. H. Blaisdell
Richard Dutton
E. M. Halligan
R. W. Layton
M. J. Quinn
R. R. Stratton

MIDDLESEX NORTH

W. M. Collins
D. J. Ellison
H. M. Larrabee
W. F. Ryan
M. A. Tighe

MIDDLESEX SOUTH

C. F. Atwood
E. W. Barron
Harris Bass
J. M. Baty
J. D. Bennett
G. F. H. Bowers
Madelaine R. Brown
R. W. Buck
E. J. Butler
J. F. Casey
C. W. Clark
B. F. Conley
H. F. Day
J. G. Downing
C. W. Finnerty
H. Q. Gallupe
F. W. Gay
H. G. Giddings
H. W. Godfrey
J. L. Golden
Eliot Hubbard, Jr.
F. R. Jouett
E. E. Kattwinkel
A. A. Levi
F. P. Lowry
A. N. Makechnie
J. C. Merriam
C. E. Mongan
J. P. Nelligan
E. J. O'Brien
Dwight O'Hara
Fabyan Packard
L. G. Paul
Max Ritvo
E. H. Robbins
M. J. Schlesinger
E. W. Small
H. P. Stevens
K. J. Tillotson
A. B. Toppan
Fresenius Van Nüys
C. F. Walcott
A. L. Watkins
Hovhannes Zovickian

NORFOLK

Carl Bearse
Arthur Berk
M. I. Berman
J. H. Carey
D. J. Collins
William Dameshek
G. L. Doherty
Albert Ehrenfried
H. M. Emmons
J. C. V. Fisher
Susannah Friedman
B. A. Godvin
J. B. Hall
H. B. Harris
R. J. Heffernan
P. J. Jakmauh
I. R. Jankelson
C. J. Kickham
C. J. E. Kickham
H. M. Landesman
D. S. Luce
C. M. Lydon
H. L. McCarthy
F. J. Moran
Hyman Morrison
D. J. Mullane
Abraham Myerson
M. W. O'Connell
W. R. Ohler
G. W. Papen
S. A. Robins
D. D. Scannell
Kathleyne S. Snow
J. W. Spellman
M. H. Spellman
N. A. Welch

NORFOLK SOUTH

C. S. Adams
F. A. Bartlett
D. L. Belding
Harry Braverman
H. A. Robinson
D. B. Reardon

PLYMOUTH

S. J. Beers
J. J. McNamara
G. A. Moore
B. H. Peirce
W. H. Pulsifer

SUFFOLK

W. E. Browne
David Cheever
Pasquale Costanza
G. B. Fenwick
Reginald Fitz
Maurice Fremont-Smith
Joseph Garland
R. L. Goodale
John Homans
A. A. Hornor
L. M. Hurxthal
R. I. Lee
C. C. Lund
Donald Munro
H. L. Musgrave
H. F. Newton
R. N. Nye
F. R. Ober
F. W. O'Brien
J. P. O'Hare
Helen S. Pittman
J. J. Regan
H. F. Root
R. M. Smith
M. C. Sosman
E. F. Timmins
J. J. Todd
S. N. Vose
Conrad Wesselhoeft

WORCESTER

C. R. Abbott
A. W. Atwood

George Ballantyne	R. J. Ward
Gordon Berry	R. P. Watkins
W. P. Bowers	B. C. Wheeler
E. J. Crane	
John Fallon	Worcester North
L. M. Felton	
E. R. Leib	H. D. Bone
L. P. Leland	C. B. Gay
W. F. Lynch	G. P. Keaveny
J. C. McCann	J. V. McHugh
A. E. O'Connell	F. A. Reynolds
J. C. Sullivan	B. P. Sweeney

APPENDIX NO. 2

Report of the Executive Committee of the Council

The Executive Committee, in the name of the Massachusetts Medical Society, endorsed the Fifth War Loan Drive and referred a telegram from Dr. Olin West, secretary of the American Medical Association, concerning it to the Society's Committee on Finance.

A question arose in the Committee as to the legality of the Council's action in May, 1944, in adopting one of the recommendations contained in the report of the Committee on Medical Information Bureau. This recommendation had to do with an appropriation of $2500, which was granted by the Council for the use of the committee. It was contended that the recommendation should have been first submitted to the Committee on Finance; failing in this, the Council should have made the appropriation contingent on its approval by this committee. The Executive Committee, taking notice of the general demand in the Society for the prosecution of the work of the Committee on Medical Information Bureau, instructed the President and Secretary to examine this situation. In the event that the appropriation had been improperly made, the President was urged to exercise his emergency powers so as to make this money available. Subsequently, each member of the Executive Committee was in receipt of an opinion on this matter written by the President. In substance this opinion is to the effect that there is inherent in several sections of the by-laws manifest evidence that it is the intention to have the Committee on Finance scrutinize any proposals for the expenditure of monies which are extraordinary or other than routine. The opinion goes on to say that there is also precedent for the appropriation of monies directly by the Council but this has been contingent on the appropriations approval by the Committee on Finance. The President has exercised his emergency powers and this money has been made available to the Committee on Medical Information Bureau.

The committee responded to a letter from Mr. Powell M. Cabot, Massachusetts director of the War Manpower Commission, asking that the Society set up machinery similar to that established for the purpose of aiding the Massachusetts OPA regarding rationing. This matter was referred to the War Participation Committee with instructions to cooperate with the Massachusetts War Manpower Commission. (The War Participation Committee will report on this matter later in this meeting.)

The Committee gave consideration to two additional communications, one from the Deputy Surgeon General of the United States Army and the other from the chief of the Procurement Division. They treat of the same subject and concern a change in policy in the office of the Surgeon General with regard to the commissioning of graduates of Middlesex University School of Medicine. I quote the pertinent part of the letter received from Deputy Surgeon General George F. Lull:

> It is true that last December we stopped taking graduates of this institution [Middlesex] into the armed services. However, a few weeks ago we were approached by the dean of the school regarding seventy-five or eighty graduates of last year who had completed internships in accredited hospitals and who had been licensed to practice in Massachusetts. We told the dean that we would take these people, provided they were physically and otherwise qualified. You will see that the new rule can only apply to recent graduates, as they must have had accredited internships, and those who have failed to pass the State Board will not be accepted.

The letter from Lieutenant Colonel Mark C. Elworthy, chief of the Procurement Division, concerns itself with the method by which graduates of Middlesex University School of Medicine, seeking commissions in the Army, will be processed in the future. This is as follows:

(1) Such a graduate must have a license to practice medicine in a state or territory and supply in proof of this a photostatic copy of his license.

(2) He must present evidence of completion of the four-year regular medical course and the possession of an M.D. degree: this evidence must be in the form of a letter from the dean of Middlesex University School of Medicine, testifying to applicant's completion of the four-year regular medical course and the possession of an M.D. degree.

(3) He must have had one year of rotating internship: in testimony thereof he must present a letter from the superintendent of a hospital approved for internship testifying to the fact that applicant completed at least one year of rotating internship. (An internship of nine months under the 9–9–9 program does not fulfill this requirement and is not acceptable.)

(4) He must have membership in a county or district medical society and present a photostatic copy of his current membership certificate or a certificate of an Army officer on active duty that he has personally examined such certificate and that it is satisfactory.

The last requirement may be waived if the applicant is in private practice and if he receives letters from three practicing physicians, graduates of approved schools and members of the district medical society where the applicant resides, testifying as to the applicant's ethical practice of medicine and professional qualifications. In lieu of this latter, the applicant may submit a letter from the secretary of the district medical society along the same lines. (The forms which these letters shall take are prescribed.)

In the event that the applicant is a graduate of Middlesex University School of Medicine and is in the process of serving an internship, in addition to the foregoing he must supply a letter signed by the chairman of the internship committee, by the superintendent of the hospital, by the chief of staff, by the chief of the medical staff and by the chief of the surgical staff. In no instance shall this letter be signed by less than three of such officers. (The form of the letter is prescribed.) This same regulation is in force for those graduates of Middlesex University School of Medicine who are hospital residents.

The Administrator of Veterans Affairs has advised that at this time only graduates of approved medical schools are acceptable for duty with the Veterans Administration Facilities. Therefore, physicians who are graduates of unapproved or substandard schools, including the Middlesex University School of Medicine, and who are physically qualified for duty only with the Veterans Administration Facilities, will not be processed. Any request to process such physicians will be returned to the Procurement Division with appropriate comments.

The Executive Committee has approved a plan submitted by the Red Cross for the training of volunteer nurse's aides in the treatment of infantile-paralysis patients in the noncommunicable stage of the disease. This matter was submitted to and approved by the Committee on Public Health of the Society.

The Committee reviewed the report of the Committee on Public Relations and approved the recommendations contained therein. (The Committee on Public Relations will report on this matter later in this meeting.)

The Executive Committee approved of certain ad interim appointments made by the President. (These appointments will be offered later in the meeting.)

Michael A. Tighe, *Secretary*

APPENDIX NO. 3

Report of the Committee on Public Relations

The Committee on Public Relations held a meeting at the Harvard Club, Boston, on July 26. President Elmer S. Bagnall, President-elect Reginald Fitz, Secretary Michael A.

Tighe and representatives from ten districts attended. In addition, there were present, at the invitation of President Bagnall, Dr. Hugh F. Hare, president of the New England Roentgenological Society, Dr. Charles W. Blackett, chairman of the Executive Committee of that society, Dr. Merrill C. Sosman, past president of that society, Mr. Cahalane, executive director of the Blue Cross, Mr. Walter Amesbury, a director of the Blue Cross and administrator of the Waltham Hospital, and Dr. George A. MacIver, president of the Massachusetts Hospital Association.

The first business of the meeting was the consideration of the inclusion of payment for x-ray examination by the Blue Cross. After presentation by President Bagnall of the action of the House of Delegates of the American Medical Association and the House of Delegates of the American Hospital Association on this question there was free discussion. Each of the guests representing the Blue Cross and the New England Society of Roentgenologists spoke on the question. The general discussion was frank and open, and there was a clear picture in the minds of the committee when the guests left. When the discussion was ended, President-elect Reginald Fitz made the following motions:

(1) The Committee on Public Relations of the Massachusetts Medical Society does not now approve the proposed plan of Blue Cross to pay $15 toward the costs of x-ray in hospitals.

(2) Discussion by the Massachusetts Hospital Service, Massachusetts Hospital Association, New England Roentgenological Society and Committee of the Massachusetts Medical Society to meet with the Massachusetts Hospital Association — Dr. Walter Phippen, Chairman — should be continued.

This motion was adopted by vote of the Committee.

The next business before the committee was consideration of the report of the subcommittee appointed to look into the possibility of better publicity for the Massachusetts Medical Society. A progress report was presented, the most important feature of which is that the Connecticut Medical Society has instituted an elaborate plan for publicity, which the committee is going to investigate and report on later.

Finally, the progress report of the Committee to Meet with the State Advisory Council of the Massachusetts Division of Unemployment Security was presented and accepted.

ALBERT A. HORNOR, *Secretary*

APPENDIX NO. 4

SOME COMMENTS ON THE PROCEEDINGS OF THE MEETING OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION

The House of Delegates of the American Medical Association convened in the Red Lacquer Room of the Palmer House, Chicago, on June 12, 1944. The speaker of the House, Dr. H. H. Shoulders, called the meeting to order at 10.15 a.m.

The preliminary report of the Reference Committee on Credentials through its chairman, Deering G. Smith, of New Hampshire, indicated an early registration of 150 delegates. Later in the week a registration of 170 delegates was reported out of a possible 175. This wonderful registration was one of the highest recorded at a meeting of the American Medical Association. It included delegates from the several states, one delegate each from Hawaii, the Isthmian Canal Zone and Puerto Rico, one delegate from the United States Army, one from the Navy, one from the Public Health Service, and one delegate each from the several sections.

This remarkable assembly indicated a strong interest of the members in the work of the House and also indicated the deep responsibility of each member. It also showed an appreciation of the seriousness of the problems that concern organized medicine in the United States.

Members of the reference committees showed a fair distribution among the several states, the specialties and the special delegates. Two members of the Massachusetts Delegation were each given a place on a reference committee. Dr. Charles E. Mongan was appointed a member of the Reference Committee of Amendments to the Constitution and By-Laws, and Dr. Walter G. Phippen was appointed a member of the Committee on the Report of Officers. Together with the secretaries from other states, Dr. Michael A. Tighe, secretary of the Massachusetts Medical Society, was granted the privilege of attending the meetings of the House of Delegates in executive session.

It would be impossible to give a detailed report of the proceedings of the House of Delegates at this meeting. Suffice it to say that the report of the proceedings of the House of Delegates would cover ninety-four pages of the *Journal of the American Medical Association*. Your reporter will endeavor to select a few of the most important items discussed and acted upon at this meeting.

On December 31, 1943, the official membership of the American Medical Association carried the names of the 123,586 members. There was a net gain of 1876 above the number of enrolled members of December 31, 1942.

The Treasurer's Report no doubt will interest some of our members. The total wealth of the Association is $5,711,853.17. The total income in 1943 was $1,186,544.26. The income in excess of the expenses was $718,873.76.

The report of the Council on Medical Service and Public Relations shows that this body is one of the most important councils of the American Medical Association. It is a little over one year old, and it made its first report at the meeting in June. The main office of the council is in the Association building in Chicago. There was also established a Washington office of the Council on April 3, 1944. It is located at 1835 High Street, N.W. Dr. Joseph S. Lawrence, executive officer of the Medical Society of the State of New York, was secured as a consultant, and the development of the office was placed under his direction.

The Council on Medical Service and Public Relations will probably become one of the most important Councils in the American Medical Association. Already it is advocating the creation of a federal department of public health, which will have a place in the President's Cabinet and will have under its control all medical activities of the federal government. As long ago as June, 1892, a communication from Dr. Henry O. Marcy, of Cambridge, Massachusetts, was received by the Massachusetts Medical Society asking for its influence in the creation of a Cabinet office for public health in Washington. The American Medical Association today advocates the same procedure.

The Council on Medical Service and Public Relations has taken up the matter of jurisdiction of the Children's Bureau of the Department of Labor in regard to furnishing medical aid to the citizens of the United States.

Let me read a paragraph from the proceedings of the House of Delegates.

> A very clear statement was made by a number of physicians representing the American Academy of Pediatrics and the American Medical Association, and by some medical members of the Advisory Committee, to the effect that physicians, while concurring in the purpose of the program to render service to and free from anxiety the families of servicemen, wished it understood that they are aware of the potentialities of this program as a possible trial balloon, bridgehead or entering wedge looking toward the extension of medical service in point of time beyond the duration of the war and in breadth of scope, both as to kinds of service and as to groups served. They served notice on the Children's Bureau that they would wholeheartedly cooperate with the program for servicemen's families for the duration but not beyond. In response, officials of the Children's Bureau stated that the program was carried on under the authority of the Social Security Act, but under temporary appropriations visualized as national defense appropriations and therefore terminating six months after the peace. As to what they might advocate after the peace, officials of the Children's Bureau refused to be committed. Miss Lenroot stated specifically that after the peace there would be opportunity for any group to advocate any kind of program, conservative or liberal, which it might choose. Dr. Eliot stated that the EMIC program as it stands was an outgrowth of the emergency and was undertaken in response to a request from an Army general at Fort Lewis, Washington. She added that it was not a part of any "master plan" of which she had knowledge.

Following this meeting the Children's Bureau issued a revised set of regulations, which were published in the *Journal of the American Medical Association* on January 22, 1944.

Contained in Title V of the Social Security Act is authorization for experiments and demonstrations in medical

care. It was this authorization which permitted the Children's Bureau to start the Washington State Health Department on an experimental program in emergency medical and infant care for servicemen's wives and children in the vicinity of Fort Lewis. This is cited by the Children's Bureau as its legislative authority for starting new programs. Existing funds can be and are being used, but when the program grows very large, as in the EMIC situation, additional appropriations are necessary. A program for the care of rheumatic children now being developed is based on this same authority in Title V of the Social Security Act. This was extensively discussed at a meeting on October 6 and 7 by a group including representatives of many public-health agencies and also including the Advisory Committee to the Children's Bureau. In approximately twelve states demonstrations in the care of rheumatic fever patients are being carried out through maternal and child health divisions of the state health departments. Presumably this program may be extended by adopting it in other states. At present it is limited to the care of those who are not able to procure treatment privately. It would appear that the Children's Bureau considers medical treatment to be an integral part of public-health service in many circumstances. Extension of the rheumatic fever program to other states and to broader population groups is a logical step in the extension of federalized medicine by those who believe that such procedures are in the public interest.

The resolution offered by the delegates from California, asking that a change be made in the office of secretary of the American Medical Association and also in the office of editor of the *Journal of the American Medical Association* was refused by a vote of 144 to 9, which was a very flattering endorsement of the work of Dr. West and Dr. Fishbein.

Your reporter would like to call special attention to the speeches of Dr. Shoulders, speaker of the House of Delegates, Dr. James E. Paullin, former president, President Herman L. Kretschmer and Dr. Frank H. Lahey.

I recommend that you studiously read the reports of the House of Delegates as reported in the June 24 and July 1 numbers of the *Journal of the American Medical Association*.

The Massachusetts Medical Society has contributed greatly to the promotion of sound underlying principles which act as guides to its members in the practice of medicine. The Society has given to the public sound advice as to public health and prevention of disease. It has furnished from its society members four presidents of the American Medical Association, namely, Dr. Henry I. Bowditch, Dr. Henry O. Marcy, Dr. Herbert L. Burrell and Dr. Frank H. Lahey. Another member of the Society has been called to the presidency of the American Medical Association. He is especially equipped for the office and well informed as to the nature of the problems confronting organized medicine. He was a member of the House of Delegates for ten years. He was a member of the Board of Trustees for five years, having been its chairman. He is a practitioner of medicine and was formerly president of the American College of Physicians. Outside the field of medicine he has been for many years one of the administrators of one of the largest universities in the United States. He brings to the office outstanding ability in the way of large vision, capacity and rare executive ability. With such a record, I think you will agree with me when I say that Dr. Roger I. Lee is eminently qualified to be the president of the American Medical Association.

CHARLES E. MONGAN, *Senior Delegate*

APPENDIX NO. 5

REPORT OF THE SUBCOMMITTEE ON POSTPAYMENT MEDICAL CARE (BANK PLAN)

I am presenting this report to the Council without a meeting of the full committee having been held. For this I deeply apologize. My understanding was that nothing was to be said or made public about the plan until it was released by the American Bankers Association, with the consent of your committee. This was not to be completed in all details until some time about the middle of this month. Two days ago, however, I received a note with an enclosure from our good president requesting me to incorporate certain lines from the enclosure in my report to the Council. I, therefore, offer this report at this time not only with my apologies to the entire committee but with my assurance to them that, as soon as the releases come through from the A.B.A., a meeting of the full committee will be held wherein they will be given an opportunity to offer suggestions or criticisms so that we may at the February meeting of the Council present our final suggestions and opinions on this subject.

As you all know, the spade work was done by the original committee under the able chairmanship of Elmer Bagnall, our president.

This plan was first devised by the Massachusetts Bankers Association, through its Consumer Credit Commission. It has been approved by the Council and is available to all banks in Massachusetts. It is proposed as a supplement to the Blue Cross and the Blue Shield.

The small-loan divisions of all banks in this state, as well as the small-loan companies, find that the second and third most frequent reasons given by people when applying for loans is for the payment of medical services. Obviously a real need exists for this plan. Let it be understood that the rates charged for this plan are low and easily explained. The charges are either added to or included in the doctor's fee. The patient signs a note for the agreed amount payable in six, eight, ten or twelve installments. A simple credit application is obtained, which the doctor or his secretary telephones to the bank. The facts are checked by the bank and the doctor is notified when the note is approved. In due course the signed note is presented by the doctor to the bank for discount. To secure the doctor and the bank against loss a reserve is set up out of each account on the books of the bank in the doctor's name. The need for the reserve depends on the credit of the patient and on the doctor's practice. By agreement, the reserve may be increased to cover even marginal situations, although the usual reserve will be about 10 per cent. It is paid to the doctor customarily as payment of each account is completed. As a result of the reserve feature the advance by the bank is lessened and the term of its payment is shortened so that the yield on the suggested rates compares closely with that of personal loans.

Whereas we are told by the banking interests that well over 90 per cent of all small loans issued by them are paid and whereas this gives us the assurance of collection by the bank's business methods, it must be understood that this plan is in no way the procedure of a collection agency. It is simply a method of making it easier for a man who eventually pays his bills to satisfy the legitimate claims of the physician and to relieve him and the doctor of repeated monthly statements. It will take time for the plan to become the customary procedure. Over the years its use will expand.

There are several brochures and pamphlets which are being passed around among you today which are connected with this plan. Your committee, when it first considered the expense of putting this plan over, felt that it might well have to be abandoned because of this factor. The minimum cost, it seemed to us, would be about $600. None of us had the courage to come before this body and ask for that amount of money. When Mr. McCarthy, of the National Shawmut Bank, presented his plan to the American Banker's Association, however, they agreed to underwrite the expense of all the brochures, literature and publicity and to collect a proportionate amount of this expense from the member banks in this state. Massachusetts is the guinea pig. If the plan works out well here it will be extended to all the states in the union. Again, members of the Council, Massachusetts, there she stands!

I am going to close this report here, because I think that any details that may have been omitted can be better brought out in answering questions. And in doing this I shall not hesitate to call on Dr. Bagnall for assistance.

DANIEL J. ELLISON, *Chairman*

APPENDIX NO. 6

REPORT OF COMMITTEE CONCERNED WITH PREPAYMENT MEDICAL CARE COSTS INSURANCE

An interim report on the progress of Massachusetts Medical Service is presented for your consideration.

SUBSCRIBER ENROLLMENT

It is approximately two years since you took the final steps that launched the corporation for prepaid medical care.

The growth since that time has been steady and progressive so that we are on a par with or ahead of the older plans in the country, excepting those of California and Michigan.

TABLE 1. *Blue Shield Enrollment.*

MONTH	NO OF CONTRACTS		NO OF PARTICIPANTS	
1943				
January	123		230	
February	216		428	
March	257		503	
April	193		396	
May	101		217	
June	386		868	
		1,276		2,642
July	666		1515	
August	579		1102	
September	901		2262	
October	1928		4435	
November	2616		5726	
December	2320		5486	
		9,010		20,526
1944				
January	798		1795	
February	597		1196	
March	1599		3703	
April	973		2356	
May	838		1839	
June	1293		2996	
		6,098		13,885
July	1354		2782	
August	1852		4006	
September	2258		4808	
		5,464		11,596
Gross enrollment (September 30, 1944)		21,848		48,649
Cancellations		3,037		7,305
Net enrollment (September 30, 1944)		18,811		41,304

Table 1 presents interesting data on growth. I shall simply note the high spots. As of January 1, 1943, we had enrolled 230 subscribers; in June, 1943, there were 2642 subscribers; at the turn of the year, in early 1944, there were 23,168 subscribers; in June, 1944, there were 37,053 subscribers; and as of September, 48,649 subscribers had been enrolled. The term subscriber means total participants in family groups. Actually, 21,848 contracts have been sold, so there is an average of 2.2 persons per contract in force.

Of considerable interest is the fact that during this period there were cancellations of 3037 contracts covering 7345 participants. This leaves a net enrollment in September of 41,304 participants on 18,811 contracts in force. These are distributed among 572 groups. These facts have just come to our attention and should be looked at critically and carefully. It must be done, however, with astuteness and without allowing precipitate action, because cancellations are a characteristic of the early history of all plans. Michigan had a complete cancellation by its original big sponsor, the Ford Motor Company, yet it went on and has enrolled 600,000 subscribers in the last four years. They were not panicked away from their basic concepts, which they had learned were correct because of such cancellations.

FINANCES

On the financial side we have been most fortunate. Table 2 portrays what has happened during this period. The figures are arranged in vertical columns that give the percentage distribution of funds for various items. Of great importance are the extreme variations in the percentages of the premium payments distributed to physicians. They vary from a low figure of 17.1 per cent to a high figure of 84.2 per cent. The corresponding figures for funds allotted to unrestricted surplus vary in a parallel fashion, the highest being a generous deposit on 68.2 per cent, and the lowest a deficit of 22.7 per cent, which occurred during the early days of the corporation. This means but one thing. Our experience today is so far from being stabilized that any significant departure from our present basis for disbursing funds would probably constitute poor business judgment. New factors coming into the picture may account for this fluctuation: tonsillectomy is the largest single item in all medical plans and comes in irregularly by seasons, with a year's waiting period; obstetric services are probably just now coming in significantly since there is also a waiting period of one year for this type of medical service; and, finally, six months ago all restrictions regarding pre-existing conditions were removed.

Our administrative costs, based on a contractual relation with the Blue Cross, have shown a steady decline until now they have reached the low figure of 13 per cent. You will recall that I have said at other times that it has been esti-

TABLE 2. *Distribution of Blue Shield Funds.*

DATE	PAID TO PHYSICIANS	OPERATING COSTS	CREDITED TO LEGAL RESERVE	CREDITED TO UNRESTRICTED SURPLUS	CASH ON HAND
	%	%	%	%	
To August, 1943	34.0	94.7		−28.7	−$2,846.71
September	25.3	37.3		37.4	
October	17.1	15.7		67.2	
November	18.2	13.6		68.2	
December	27.4	26.5		21.1	
To January, 1944	32.3	39.0		3.7	$10,387.31
January	24.7	16.1		34.2	
February	46.2	16.4	25.0	12.4	
March	37.2	13.2	25.0	24.6	
April	46.2	14.3	25.0	14.5	
May	64.9	13.2	25.0	−3.1	
June	29.2	13.4	25.0	32.4	
To June, 1944	41.7	13.9	25.0	19.4	$45,369.29
July	84.2	13.5	25.0	−22.7	

mated that to administer a medical-service plan without joint contracts with the Blue Cross would require about 25 per cent of the premiums. Our expense for administration will show an increase in the immediate future. At the request of the Blue Cross, one of their employees, Mr. E. J. Cunningham, has been assigned full time to Blue Shield, and his services will be charged completely against us. In the near future the services of a physician to help in reviewing claims will have to be engaged; for the past two years I have worked with the claim department, of course without charge, so that we might get on our feet financially.

We have done satisfactorily to the extent of having an unrestricted surplus of $46,571.62. These funds must be conserved so that eventually we can include hospital medical care. It is the ruling of the Commissioner of Insurance, at least to date, that we cannot reimburse the society its $25,000 until we have accumulated a surplus of $255,000 surplus. At that time the requirement that 25 per cent of premiums must be placed in a legal reserve that cannot be touched will also be removed.

CURRENT PROBLEMS

There are, of course, and probably always will be, the so-called "current problems." These problems, however, have been at an absolute minimum in Massachusetts as compared with the experiences encountered in other parts of the country. One hears an occasional disparaging remark, but the total overall interrelation between the profession, the subscribers and the Blue Cross has been healthier here than in any other place in the country, with due consideration of our size. So if minor problems present themselves, we should be shortsighted to precipitate ourselves into unwise actions and departures.

Subscriber satisfaction has been hard to measure. It will never be 100 per cent. Our cancellations bear that out. The provision for nonpayment to nonparticipating physicians has been the chief cause of complaint. A few groups have said that the total cost for hospital and surgical contracts when combined is rather high. Nonpayment for nonhospitalized surgical conditions has been sometimes objected to. Absence of good faith on the part of participating physicians who agreed in a signed contract not to make additional charges to the under-income group but who have done so, even to the extent of charging as much again as the corporation allowed, has rightly caused mistrust of our purpose on the part both of the subscriber and of the industry in which he works. Nonparticipation of or open criticism by industrial physicians has kept groups from joining.

Dissatisfactions among the profession have arisen at times but for the most part have been satisfactorily handled.

The fee schedule has been the source of some misunderstandings. By and large it has been considered to be equitable and fair. Certain individual items have not been fairly estimated. At my suggestion, and with the approval and instruction of the Board of Directors, all sections of the schedule will be restudied by committees appointed in the different specialties, and an effort to arrive at a fully acceptable revised schedule will be made. There of course cannot and will not be any general upward revision of the schedule. We may as well quit tomorrow as ask the subscribers to pay larger premiums, not for an increase in benefits, but for a larger stipend to physicians. This work, if accurately done, will take some time. Suggested changes must be weighed against our actual experience before being put into practice, to allow us to continue to operate in the black. Operating in the red, with consequent reduction in professional fees, has been the chief source of turmoil in other state societies; this we have been spared, only because we have operated in the black.

There are, of course, administrative problems. In the past there have been delays in paying doctors, but an attempt to correct this has been made by authorizing immediate payment of claims once they are cleared, rather than paying once a month. The service report has been revised so as to require less work. There is often a delay, up to six weeks or more, before the physician knows he has a Blue Shield case on his hands. This is sometimes due to delay on the part of the hospital in reporting a Blue Cross subscriber, whereby the corporation can tell from its files that the patient is also a Blue Shield subscriber, and so notify the physician. Much of this difficulty could be immediately eliminated if the hospitals would comply with a simple request I presented many months ago for their approval; namely, that the Blue Cross admitting form have a simple Blue Shield stub attached, on which the hospital admitting officer can write the patient's name, if a Blue Shield subscriber, and the doctor's name, tear the stub off and present it to the doctor. But all good things come slowly. Even that would not correct one situation in which a participating physician has in his drawer eleven incompleted forms, which he refuses to send in even after several letters from Boston.

PARTICIPATING PHYSICIANS

The final key to our success is the participation in this program by the bulk of the profession. If they come in, we must succeed; if they do not, we must inevitably fail with all the consequences entailed. Up to April, 1943, there were 3283 participating physicians; in the next year and three months, 294 more physicians had enrolled; and in the last three months (July, August and September), 86 more physicians have enrolled, giving a total of 3663 physicians. Withdrawals have been negligible. If the generous allowance of 5000 physicians in actual practice is taken, then 75 per cent of them are participating.

Why we need full support is clearly demonstrated by one experience. One large firm with over 2000 potential subscribers was considering the Blue Shield; they operate in the metropolitan area of Boston. They appointed a group of company officers to investigate participation. Their conclusion was that until free access to all hospitals and specialties was assured in the Boston area by a broader participation of physicians than now exists they would not join the Blue Shield.

Why is it that men refuse to support the effort of their own society in a co-operative endeavor with public bodies? Do they not see the dangers ahead?

Yes, it is true that, as they say, wages are high. But so is the cost of living, and those families under the established income limits are having a harder time and need the service more than ever before.

Yes, it is a fact that we are now prosperous. But every one talks in terms of retrenchment in the coming years. Then both the people and the profession will be fortified against adversity if this program is as widely used as the Blue Cross.

Yes, it is true that a man likes to feel that he can charge what his services are worth, even to the low-income group. But if a man's colleagues who are equally equipped as himself consider this program fair, why is it that he should expect a larger fee, particularly when it jeopardizes a patient's financial integrity or forces the patient from a self-supporting to a charity service. What solid ground has he to stand on if he quotes Chicago spokesmen to the effect that physicians deal fairly with patients by scaling fees downward according to their means, when his local colleagues say that he is a major cause of some of our troubles by scaling his charges inconsiderately upward, regardless of the burden on the stricken patient, so as to maintain a personally established and personally supervised scale of values.

Yes, it is a fact that no law has yet been passed that places medicine under governmental supervision. But the present administration will certainly continue its efforts for such medical legislation; furthermore, the opposing candidate has called for extension of social-security protection in medical care. And do not forget that the mechanism must be insurance on the same basis as that for unemployment — compulsion. Mayor LaGuardia has initiated a program with the full support of the industrial giants in his territory covering income groups up to $5000. The conservative party of England has presented its own social-security program, which in essence is identical with that of Beveridge; Canada has nearly completed its program for socialized medicine. The United States Chamber of Commerce has recently voted approval of governmental provision of medical care for workers, in the event that industry fails to do so on a voluntary insurance basis. Our only weapon against this current is the plea, Let's do it on a voluntary basis! Yet some physicians refuse to co-operate. If a sufficient number continue to hold out we shall fail. Who, then, do these physicians think are going to fight for their rights — the large number of men who have made these efforts to date? No indeed! As a body, I think that they may decide that further effort is futile. It behooves the Massachusetts Medical Society to work arduously to see that its full membership participates in this program.

* * *

Finally, there is one matter on which I ask action. In probably an unorthodox fashion, the Committee Concerned with Prepayment Medical-Care Costs Insurance was continued after its work had been completed. With the incorporation of Massachusetts Medical Service, it really had no further standing. I used it as a means whereby I, its president, could bring you periodic reports of progress. That has worked well, and I believe that, in the future, the President, if a physician, should be allowed the privilege of your rostrum. At this point I should point out that the by-laws adopted by you do not provide that the president shall be a physician. We who studied the problem thought that he should be and probably would be a physician. We left it unspecified, however, so that if, in the distant future, there were solid reasons for having a layman as president, that could be done. At any rate the control of the by-laws with reference to such matters rests wholly in the hands of the voting members — the Executive Committee of the Society.

Let us clarify the picture by discharging a committee that has completed its work. Provided that a physician will be president during the evolution of the program, I assume that some proper way under the rules of procedure will be found to permit him to make periodic reports to the Council in behalf of the entire profession.

JAMES C. MCCANN, *Chairman*

APPENDIX NO. 7

REPORT OF THE COMMITTEE ON EXPERT TESTIMONY

A special committee to consider medical expert testimony as given in courts was appointed by the president of the Massachusetts Medical Society in 1936. The original committee consisted of Drs. David Cheever, Francis P. McCarthy, Walter Phippen, J. J. Goodwin and George L. Schadt, chairman. The present committee consists of Drs. David Cheever, William Brickley, Francis P. McCarthy, Carl Bearse and Frank R. Ober, chairman.

The present committee held its first meeting two years ago and has met several times since to discuss the problem of medical expert testimony. It has become apparent to us that the duty of a special committee appointed to consider

medical testimony in courts is to report its findings and make recommendations to the Council of the Massachusetts Medical Society. Your committee has studied a mass of material which has been recently published covering many fields of legal medicine. It has studied recent articles published in medical journals on this subject, and there has been correspondence with some of the state medical societies which have organized plans adopted to their situations.

California and Minnesota have established permanent committees on medical expert testimony, and the Minnesota committee collaborates with a similar one from the state bar association.

It must be stated, however, that the Massachusetts Medical Society has not been remiss in this matter since two of our standing committees — the Committee on Medical Defense and the Committee on Ethics and Discipline — have settled many such problems for several years. These two committees have their special functions, which entail a good deal of work, so it does not seem wise to overload these two bodies with a job which may not necessarily come into their province.

Medical expert testimony is in a constant and changing fluid state. In every case in which a physician is involved, there may be a problem to be solved by the medical profession. We as a group are concerned with ordinary as well as expert testimony. Testimony may be given in hearings, before industrial accident boards, before judges and before juries, when grievances occur or when there are trumped-up cases. There should be some new permanent machinery set up by the Society in order that the testimony of poor or bad witnesses may be reviewed and suitable methods advised for correction or for disciplining the offending medical witness or lawyer, or both.

This committee should be a standing one. The Massachusetts Bar Association might be invited to set up a similar committee among its members, and these committees should be given authority to collaborate. It is important that the committee be a standing one. It should also collaborate with the Committee on Ethics and Discipline and the Committee on Medical Defense. All cases with evidence of bad testimony should be heard and investigated by such a committee, which should be empowered to make recommendations to the Committee on Ethics and Discipline.

The functions of a standing committee on medical expert testimony should be twofold: first, punitive and, second, educational. It should set up a program of education for the physicians. It should collaborate with all the parties concerned, and above all it should not endeavor to solve all the many controversial problems at once.

This special committee therefore recommends:

(1) That a standing committee of five or more, to be called the Committee on Medicolegal Problems, be appointed by the President.

(2) That the by-laws of the Massachusetts Medical Society be amended to provide for such a body.

FRANK R. OBER, *Chairman*

CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

Weekly Clinicopathological Exercises

FOUNDED BY RICHARD C. CABOT

TRACY B. MALLORY, M.D., *Editor**

BENJAMIN CASTLEMAN, M.D., *Acting Editor*

EDITH E. PARRIS, *Assistant Editor*

CASE 30511

PRESENTATION OF CASE

A seventy-six-year-old woman was admitted to the hospital because of abdominal pain.

Five days prior to admission, while sitting quietly in the evening, the patient felt a rather severe colicky pain below the left breast just outside the midline. This disappeared during the course of the night, and for the next two days she felt well and was fairly active. Two days before entry the pain recurred in the epigastrium and was intermittent in character. A physician prescribed some pills; these made her feel nauseated, but she did not vomit. On the same day she had a bowel movement; this was followed by constipation, which failed to yield to a saline cathartic. On the day before admission the pain shifted to the right lower quadrant. It was constantly present and was aggravated by movement in bed. The temperature rose to 101°F. There was no vomiting or cough.

For six and a half years prior to entry the patient had been known to have hypertension, with pressures of 160 to 170 systolic, 100 to 110 diastolic. Six months before admission the blood pressure was 190 systolic, 100 diastolic.

Physical examination revealed an acutely ill woman. There was exquisite tenderness over the right half of the abdomen, which was thought to be most marked in the right upper quadrant over the gall bladder. Practically no muscle spasm was present. Palpation in the right lower quadrant produced pain referred to the left lower quadrant. Tenderness in the right costovertebral angle was demonstrable when she lay on her back, but this disappeared when she turned on her right side. The psoas sign was negative. There was no rectal tenderness.

The temperature was 101°F., the pulse 88, and the respirations 24. The blood pressure was 190 systolic, 90 diastolic.

Examination of the blood revealed a white-cell count of 18,000, with 80 per cent neutrophils. The hemoglobin was 15.8 gm. per 100 cc. The urine had a specific gravity of 1.032, with a ++ test for albumin and a sediment containing 15 white cells, 25 epithelial cells and an occasional granular cast per high-power field. The serum nonprotein nitrogen was 47 mg. per 100 cc., and the blood sugar was normal.

Two hours after admission a cholecystectomy was performed under ether anesthesia. A tense, distended, edematous gall bladder surrounded by recent inflammatory adhesions was found. It had a queer yellowish color, with greenish areas, and appeared unlike any acute gall bladder that the surgeon had seen in the past. The common duct was apparently of normal size. The head of the pancreas was normal to touch but not entirely normal in appearance; there was no fat necrosis.

*On leave of absence.

The pathological report was acute and chronic cholecystitis.

Following operation the patient was quite drowsy, although she received little medication. She continued to complain of pain on the slightest movement. An electrocardiogram revealed auricular premature beats but no evidence of heart disease.

On the afternoon of the third postoperative day the patient suddenly became dyspneic and cyanotic, although the lungs remained clear. The blood pressure fell, and she became stuporous, failed to recognize her family and expired about three hours after the onset of the acute episode.

Differential Diagnosis

Dr. Reginald H. Smithwick: We have a woman in the older age group who was operated on approximately one week after the onset of symptoms, an acute near-gangrenous gall bladder being removed. She died suddenly a few days following operation and three hours after the onset of an acute episode consisting of dyspnea, cyanosis and low blood pressure. The questions seem to be, What was the cause of death, and did the acute gall bladder represent the full extent of the pathology?

Certain symptoms, signs and laboratory data are given. The first symptom was pain, apparently quite severe and sudden in origin, located in the left anterior chest at about the level of the sixth or seventh dorsal vertebra and to the left of the midline; it lasted several hours and never recurred. Such a pain might have arisen from pathology in a thoracic organ, such as the heart, the lung or the aorta, but no evidence of cardiac or pulmonary disease was noted. It could have been referred pain from an upper abdominal viscus, such as the pancreas or gall bladder, but that, although wholly possible, is unusual. After two days without symptoms the onset of epigastric pain, intermittent in character, was noted. This was associated with nausea and constipation, and after twenty-four hours shifted to the right lower quadrant. Following this it was continuous, aggravated by motion and associated with fever, an elevated white-cell count and marked tenderness over the right abdomen, maximal over the gall-bladder region, with practically no spasm. All this seems consistent with the finding at operation of an acutely inflamed, distended gall bladder. It is rather surprising, however, that no mass was felt in view of the absence of spasm, and the pain on motion is a little more marked than one would expect since pain at this stage of acute infection of the gall bladder is usually associated with spasm and a mass due to the implication of the omentum and colon by local peritonitis. One gathers the impression that the surrounding peritonitis was not marked, since the gall bladder was removed, the common duct said to be normal in size, and the head of the pancreas normal to palpation but not in appearance. The latter suggests the possibility that some form of pancreatitis also existed. An extension of this process subsequent to operation might explain the persistence of pain on motion following operation, — I assume that pain from the incision was discounted, — the drowsiness of the patient, owing to toxemia, and the sudden death with dyspnea and cyanosis and circulatory collapse without evidence of pulmonary or cardiac disease.

One might speculate regarding other possibilities. In a woman of this age, with systolic hypertension, indicating disease of the large blood vessels, vascular accidents may be expected. I am inclined to discount the moderately elevated nonprotein nitrogen as being the result of dehydration and hemoconcentration and to exclude uremia as a cause of death. There seems to be no good evidence of a cerebral accident or coronary thrombosis. Other vascular accidents, such as thrombosis of the mesenteric vessels and rupture of a blood vessel, also seem unlikely, although the possibility of dissecting aneurysm should be mentioned, largely because of the sequence of symptoms: first, thoracic pain, then, upper abdominal pain and, finally, lower abdominal pain. The unusual appearance of the gall bladder, which was tense, distended, edematous and yellowish rather than the more usual reddish purple, with greenish areas, was probably the result of the proper combination of obstruction, infection and the transudation of bile pigments into the wall. I have seen a few somewhat similar acute gall bladders. In a patient of this age group, pulmonary embolism is a possible cause of death, but it seems as if some physical signs, such as distended neck veins and pulmonary edema, pointing to this should have developed in three hours. This is also likelier to cause death after a longer interval following operation. Rupture of a dissecting aneurysm into the pleural or pericardial cavity usually results in death in a few minutes rather than in hours. Hepatic insufficiency seems unlikely in the absence of jaundice. Adrenal insufficiency due to hemorrhage into the medullas of the adrenal glands is a rare cause of death with circulatory collapse.

A rapidly progressing pancreatitis following the acute cholecystitis seems a possible explanation for the persistence of abdominal pain and the continued downward progress of this patient after operation, with sudden death forty-eight hours later.

Dr. Helen Pittman: This woman had had hypertension for six and a half years. She was an extremely active woman for her age. When I first saw her she was unusually well. I could never make any diagnosis except for a certain amount of arteriosclerosis and hypertension. In the last year she had been aging rapidly. I saw her about three months before admission, and at that time she had lost her vitality, tired easily and had more hypertension, but nothing new. I did not hear from her again until seven o'clock in the evening of admission. I was

struck by the fact that she had severe pain. She was a person who had always been well and who had never been a complainer, and she was obviously in extraordinarily severe pain on the slightest motion. There was exquisite abdominal tenderness without spasm or with so little spasm that it was disproportionate to the amount of tenderness. I called for Dr. McKittrick, and the rest of the story is his.

DR. LELAND S. MCKITTRICK: Dr. Smithwick gave an excellent discussion, and I was pulling hard hoping that he was going to take a long shot and make the correct diagnosis. He made the logical one, however.

I did not know what this patient had. I would not have operated if I could have been sure that she did not have an early rupture of the gall bladder. It seemed that tenderness was definitely present in the gall-bladder region, and whereas we suspected acute cholecystitis, I was not sure enough of the diagnosis to refuse operation.

It was a queer looking gall bladder and was as described in the abstract. I did not attempt to describe the appearance of the pancreas because I could not. It just did not look normal even though it felt all right. There was no fat necrosis. I was fairly sure that the patient did not have an acute hemorrhagic pancreatitis. We took the gall bladder out and did not think too much about it until I opened it and did not find any stones. I commented to the small but select group assembled at one o'clock in the morning that I had not seen more than one or two acute gall bladders that did not contain a stone. I was worried about it. I did not notice anything abnormal in the liver.

We finished the operation but were unhappy in our minds, thinking probably that this was one of those conditions for which we do not know the explanation and that it was an acute cholecystitis. I did not know what happened postoperatively except that she died, and I was totally ignorant about what was going to be found until I saw the autopsy.

CLINICAL DIAGNOSIS

(Acute cholecystitis.)

DR. SMITHWICK'S DIAGNOSES

(Acute cholecystitis.)
Acute pancreatitis.

ANATOMICAL DIAGNOSES

Thrombosis of celiac axis and hepatic, cystic, superior mesenteric and splenic arteries.
Infarction of liver, spleen and intestine.
Arteriosclerosis, severe, generalized.
Cardiac hypertrophy, hypertensive type.
Pulmonary emboli, multiple, small, recent.
Operation: removal of gangrenous gall bladder.

PATHOLOGICAL DISCUSSION

DR. BENJAMIN CASTLEMAN: When the abdominal cavity was opened, the striking finding was early gangrene of the entire small intestine and part of the right colon. The infarction was caused by a recent thrombosis of the superior mesenteric artery, which must have developed postoperatively, since it was not seen at operation.

The cause of this patient's preoperative symptoms was unique in the experience of this laboratory — thrombosis of the celiac axis. The abdominal aorta showed severe arteriosclerosis, the intima being extensively frayed and fragmented. The orifice of the celiac axis was surrounded by a calcified plaque, and the lumen was occluded by a gray adherent thrombus about 2 cm. long (Fig. 1). There was

FIGURE 1. *Diagram of Abdominal Aorta and Its Branches. The shaded areas represent the older thromboses, whereas the black areas represent the more recent ones.*

thrombosis of the hepatic artery and of its two branches well into the liver, with the result that the liver was extensively infarcted. What the surgeon removed was an early gangrenous gall bladder due to thrombosis of the cystic artery. The left gastric branch of the celiac axis was uninvolved. Two of the terminal branches of the splenic artery

were thrombosed, probably by emboli from the celiac artery, with resultant infarcts of the spleen. The pancreas was not involved. Whether the cholecystectomy in some way started off this thrombosis I do not know, but I feel fairly sure that this occurred after the operation, because this thrombus was quite recent when compared with the thrombus in the celiac artery. Around the orifice of the superior mesenteric artery there was also an atheromatous plaque, which probably had something to do with the formation of this thrombus. There was no involvement of the renal or inferior mesenteric arteries.

Ordinarily one does not get such widespread infarction of the liver without damage not only to the hepatic artery but also to the portal vein. In this woman the portal vein was normal. These infarcts are similar to those produced experimentally by ligation of the hepatic artery, but there, of course, the occlusion is sudden. Here it probably was not so sudden. The presence of relatively old thrombi in the distal portions of the hepatic arteries and of the more recent thrombus in the proximal portion suggests that the hepatic occlusion began as emboli from the celiac artery. There were a few small emboli in the terminal vessels of the lungs.

Dr. Maurice Fremont-Smith: I wonder if the finding of extreme tenderness without spasm is helpful in making a diagnosis. I remember a patient at the Peter Bent Brigham Hospital, when I was a house officer there, who had extreme pain and tenderness but no spasm and who was found to have mesenteric thrombosis. Is the absence of spasm an important physical differentiation?

Dr. McKittrick: I do not know.

Dr. Castleman: I do not believe that this patient had mesenteric thrombosis when she came in. She had thrombosis of the celiac axis, and the pain was due to the gangrene of the gall bladder.

Dr. Fremont-Smith: In other words, it was not inflammatory but circulatory. That is my point; there was not the amount of spasm that one would expect with an inflammatory process.

Dr. Smithwick: Severe visceral pain may occur without spasm of the abdominal wall. If, for example, one blows up the small intestine with a balloon, thus creating intense, agonizing pain, the abdomen is flaccid.

Dr. McKittrick: Spasm is an uncertain thing, particularly in old people. We see not a few patients with peritonitis who have no spasm. It is such a hard thing to evaluate that I cannot say how much she had, although she did have some.

Dr. Francis D. Moore: One can have spasm over an infarcted loop of small bowel, once it has become gangrenous.

Dr. McKittrick: But in such cases there is peritonitis. Whether spasm occurs before infection has set in, I do not know. It is a good point.

CASE 30512

Presentation of Case

A seventy-year-old man was admitted to the hospital in coma.

The patient had apparently been well until the day before admission, when he developed pain in the left upper quadrant associated with nausea. Because of his condition no data concerning the character and radiation of the pain could be obtained, other than that it was apparently severe and constant. Several hours later, following an attempt at high colonic irrigation, the patient vomited black foul-smelling material. He was admitted to a community hospital and given morphine, following which he became stuporous and remained so. His skin was cold, and it was difficult to administer intravenous fluids. A white-cell count was said to have been 20,000. He was transferred to this hospital the following morning. For two or three weeks prior to admission he had been constipated.

The patient had had a cholecystectomy twenty-eight years previously, and an operation for a ruptured appendix two years later. Five years before entry he had had a prostatectomy, from which it took him nine months to recuperate. Both parents were said to have died of diabetes.

Physical examination revealed a well-developed and well-nourished comatose man. The pupils were contracted, and the tongue was dry. The skin of the extremities was moderately cold and clammy. There was tenderness in the left upper quadrant, where a firm, ill-defined, pulsating mass could be felt. Percussion over the area revealed dullness but no flatness. Peristaltic sounds were distinctly audible. Rectal examination revealed a depression in the region of the right lobe of the prostate, the remainder of the gland being firm but not enlarged.

The temperature was 101°F., the pulse 110, and the respirations 16. The blood pressure was 96 systolic, 80 diastolic.

A white-cell count was 13,400. The urine had a specific gravity of 1.020, with a +++ test for albumin, and the sediment contained many coarsely granular casts, 10 white cells and a rare red cell per high-power field; there was no sugar or diacetic acid. A blood sugar was 121 mg. per 100 cc. The serum nonprotein nitrogen was 43 mg., and the protein 7 gm. per 100 cc. The chloride was 98 milliequiv. per liter, and the carbon dioxide content 30.1 milliequiv.

A roentgenogram of the chest revealed only a high diaphragm bilaterally. X-ray examination of the abdomen showed gas in the stomach and colon,

but none in the small bowel. On the left side, near the transverse process of the third lumbar vertebra in the course of the ureter, there was a small ill-defined shadow of the density of calcium.

Catheterization on admission revealed only 5 cc. of urine in the bladder. A cystoscopy was performed, but no obstruction to the left ureter could be demonstrated, there being good urinary output from the kidney. Ten per cent dextrose in water, followed by 5 per cent dextrose saline solution, was administered intravenously. The pulse rate rose to 140, and the respirations to 30. The abdomen became tympanitic and diffusely tender, but peristalsis remained good. There was some flaccidity of the left leg, and the right corner of the mouth drooped, but no abnormal reflexes were obtained. The white-cell count rose to 17,700, and the non-protein nitrogen to 59 mg. per 100 cc. On the second hospital day the patient expired.

Differential Diagnosis

Dr. Francis D. Moore: I should like to start off by looking at the x-ray films.

Dr. George W. Holmes: As already stated, the diaphragm is high on both sides, but the right half is definitely higher than the left. There is a great deal of gas in the stomach, but I do not believe that the colon is particularly dilated, although it is a little unusual that there should be so much gas there without any in the rectum. I suppose they thought that this area of calcification might have been a stone in the ureter. It does not look much like one. Since the ureter was catheterized, there is no reason to suspect that there was a stone.

Dr. Moore: Is the kidney abnormally displaced to the left?

Dr. Holmes: Yes; not only the kidney but also the ureter along its entire length.

Dr. Moore: Does this big area of "nothingness" suggest a mass that could be the one displacing the kidney?

Dr. Holmes: Yes; but I am not too certain about it.

Dr. Moore: We have here a seventy-year-old man who had pain in the left upper quadrant. I have gone over the record and tried to reconstruct the time relations. He was transferred to a local hospital, was given morphine and went into shock and coma all on the same day. The next day he came here, possibly with peritonitis, and the following day he died. Forty-eight hours transpired from the first acute symptom to death, with no operative procedure having been done. The pathologic process was a rapid one.

There are features in the record to suggest a great many diagnoses: gastric or colonic neoplasm, aortic aneurysm, ureteral stone, cardiac failure, chronic vascular nephritis, mesenteric thrombosis, cerebral thrombosis and benign hypertrophy of the prostate. I shall attempt to select the one most responsible for his demise, although in all probability he had several diseases.

For three weeks prior to admission he had been constipated. Any man of seventy has a right to intermittent periods of constipation; however, since he was in coma and the history was obtained only from the family, they must have observed that he was having real trouble for three weeks. This suggests that the gastrointestinal tract was implicated. We find that after he received a colonic irrigation he vomited black foul-smelling material, which further suggests that he might well have had some sort of an obstructing lesion, even a gastrocolic fistula resulting from a neoplasm. But I am disturbed by the normal gas shadow in the stomach. The colon looks normal; there are no signs of tumor, and there is no abnormal distention. As a matter of fact I believe that is as good an air picture of that region as one could hope for. The patient had a tender mass in the left upper quadrant, which fits with the concept that he had a neoplasm in this region. He developed signs of peritonitis, compatible, of course, with a tumor that has ruptured or undergone necrosis. The white-cell count and temperature went up, which is also consistent with that general idea. There is no note of a guaiac test on a stool, which is unfortunate. One thing in the story is against gastrointestinal neoplasm; namely, at the time of admission to the hospital he was a well-developed and well-nourished man and one would not expect him to be such if he had a gastrointestinal neoplasm that had been there long enough to perforate, especially if a gastrocolic fistula had formed.

Renal tumor is possible, although the statement about the urine makes that unlikely; furthermore, the kidney was displaced in the wrong direction for a tumor of the parenchyma. The spleen or pancreas could have been involved, but it is hard to see how a tumor of the spleen or pancreas could produce death in forty-eight hours, even though it had undergone necrosis. Tumors of the pancreas associated with pancreatitis are, to my knowledge, rare.

How about aortic aneurysm? That seems like a good possibility. The mass pulsated. Incidentally, that does not make it an aneurysm because in an older person any mass that presses on large blood vessels pulsates. A big aneurysm at this point, big enough to be felt from the outside, would have to include a great many other vessels — the celiac axis, one or both mesenteric arteries and probably one or both of the renal arteries. So its formation would really be a disastrous event and could kill a person in a short time, as this lesion did. Against it, however, we have no previous history of heart disease or of hypertension, and the heart was not enlarged, according to the record. The facts that there was no calcification in the aorta and that the patient continued to have good urinary output are also against aneurysm.

The concept of ureteral stone is ruled out by the cystoscopic findings. I shall not spend further time on it.

How about the heart? It was not enlarged, but when he received 10 per cent dextrose in water and 5 per cent dextrose in saline solution, — it does not say how much or how fast, — the pulse went to 140 and the respirations to 30, which suggests that he did not have much cardiac reserve. Kidney damage is well substantiated by the record — albumin, casts, white cells, a rare red cell and a rising nonprotein nitrogen level; perhaps the last was due to dehydration, and yet in spite of the dehydration he could not concentrate over 1.020. So we are justified in saying that he had a chronic renal lesion. The fact that he had only 5 cc. of urine in the bladder was perhaps due to shock.

A cerebral vascular accident seems likely because he went into coma rapidly. One might ask, Could the coma have been due to the morphine? It is worth while pointing out that when he came to this hospital he was still in coma but the respirations were 16; hence, morphine poisoning seems unlikely. Since he had a flaccid left leg and something wrong with the mouth, he probably had had a cerebral vascular accident. Venous mesenteric thrombosis can be rapidly fatal and can at times produce a mass, but the mass is due to the matted loops of gangrenous bowel and I should not expect that it would transmit pulsation from the aorta.

Pulmonary embolism is also possible, but it may have been masked by other things.

I have mentioned all the pathologic processes that are suggested by the record. There are points pro and con on all of them, but I am going to take as my first diagnosis a malignant lesion of the gastrointestinal tract, either in the stomach or large bowel, I do not know which, with local rupture producing peritonitis and shock. I hypothecate that he was given morphine while in shock, that this further depressed his activity and possibly lowered his blood pressure and that he then developed a cerebral thrombosis, which produced neurologic signs. I believe that he also had arteriosclerotic heart disease, chronic vascular nephritis and probably benign hypertrophy of the prostate. As a second choice, I shall say aortic aneurysm.

I should like to ask Dr. Holmes, now that I have made my diagnosis, what his x-ray diagnosis would be purely on the basis of the displaced kidney.

Dr. Holmes: There is just a possibility that that was simply technical because of the way the film was taken. If the kidney is displaced one would have to think of a retroperitoneal mass. I should not expect a ruptured viscus to do that unless there was an abscess behind it.

Dr. Moore: Would you expect an aortic aneurysm to do it?

Dr. Holmes: That is a possibility, but I should think that an aneurysm capable of doing that would also have eroded the bodies of the vertebras, provided that it had been there any length of time.

Dr. Moore: And also completely destroy the renal vessels, which it did not do.

Dr. Holmes: It might be a retroperitoneal mass of some sort, but I cannot go any farther.

Dr. Maurice Fremont-Smith: This was an extremely interesting case. Additional history was obtained afterward. For three months before entry this man had had pain in his back, for which he had gone to an osteopath several times for treatment, with apparent improvement. Both dorsalis pedis arteries were palpable and pulsating. Anuria was a striking part of the picture. Although Dr. Colby reported that the kidneys were excreting urine, we catheterized him twice without obtaining any. The mass was definitely pulsating. We wondered if it was a mass lying over the aorta, in spite of the fact that it was well out to the left.

Dr. Moore: Was it expansile?

Dr. Fremont-Smith: I cannot say, but it had a definite pulsation. We thought that he had had a vascular accident, but the pulsating dorsalis pedis arteries argued against a dissecting aneurysm. Our tentative diagnosis was a rupture of an aneurysm of the renal artery, with a retroperitoneal mass of blood connected with a vessel. We also thought of the possibility of a cerebral accident, but did not believe that it could have been the cause of death.

Dr. Benjamin Castleman: Dr. Moore, have you anything more to say?

Dr. Moore: These points certainly make me incline toward aneurysm more than anything else.

Clinical Diagnoses

Aneurysm of left renal artery, with rupture into retroperitoneal space?
Cerebral thrombosis.

Dr. Moore's Diagnoses

Gastrointestinal neoplasm, with rupture and peritonitis?
Aortic aneurysm, with rupture?
Arteriosclerotic heart disease.
Chronic vascular nephritis.

Anatomical Diagnoses

Aneurysm of abdominal aorta, with rupture into left retroperitoneal space.
Arteriosclerosis, generalized.
Cardiac hypertrophy, hypertensive type.

Pathological Discussion

Dr. Castleman: The autopsy showed a large retroperitoneal mass, which proved to be a hema-

toma, measuring 22 by 14 by 10 cm., that surrounded the left kidney, adrenal gland, renal artery and ureter and was surmounted by the spleen and pancreas. The hematoma had resulted from a rupture of an aortic aneurysm beginning below the level of the renal arteries and extending to the bifurcation.

DR. MOORE: Where was the kidney in relation to the mass?

DR. CASTLEMAN: Completely surrounded by the hematoma.

DR. MOORE: Was its circulation obliterated?

DR. CASTLEMAN: No; the aneurysm occurred below the level of the renal artery. The hematoma surrounded the kidney and renal artery, but the artery was not intrinsically involved. The anuria was probably due to shock. There was slight vascular disease of the kidney.

DR. HOLMES: It is unfortunate that we did not have better films of the kidney. I suppose the patient's condition was too poor.

DR. MOORE: Was anything found in the brain?

DR. CASTLEMAN: It has not been sectioned yet. Small multiple thrombi will probably be found to account for the symptoms.

DR. HOLMES: Were the vertebras involved?

DR. CASTLEMAN: No.

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CHRISTMAS, 1944

Christmas this year, as never before, will be celebrated by Americans in many lands and in strange manners. In improvised hospitals from Alaska to India and from New Zealand to the fields of Flanders, American doctors and nurses will be bringing the traditional cheer of the season to many thousands of their sick and wounded countrymen. The hard-won islands of the Pacific will feel its temporary impact, and it will be briefly acknowledged in the stubbornly defended mountains of northern Italy and in the rutted mud of western Europe.

December 25, in short, is Christmas, and it will evoke the same images, nostalgically, and have the same meaning to millions of modern crusaders upon whom the sun now never sets as it will in their homes in Massachusetts or in California or in Montana.

We have a right, we hope, to believe that this Christmas is witnessing the peak of our foreign military traffic; that before another season of giving has come around, we will have ceased to include among our overseas packages those of reeking tubes and iron shards; that our hard-pressed enemies will have decided to cry "Enough," and will embrace once more — or for the first time — the doctrines of peace on earth and of good will toward other men.

Our victory is in sight, but it is at the end of a long road that is still not too close to its ending. We can be thankful that we are approaching that end, however, in the company of a good fellowship, all bent on the same goal and with the same motives. It is as Paul, approaching Rome in some tribulation, found that the brethren had come to meet him, even as far as Appii Forum: "Whom, when Paul saw, he thanked God, and took courage."

Christmas provides as good a motive for referring to the Scriptures as any, if a motive need be sought, so let us add one more singularly appropriate quotation, from the best loved Psalm: "Thou preparest a table before me in the presence of mine enemies: . . . my cup runneth over."

PROPHYLACTIC USE OF SULFONAMIDES

The herding and alteration in the mode of living of young adults in time of war inevitably result in epidemics of viral and bacterial disease, especially infections of the upper respiratory tract. The present war has been no exception, although there have been striking differences in its epidemic diseases from those of World War I. Fatalities and serious illnesses have been greatly diminished as the result of new therapeutic agents, but the loss of manpower days as the result of upper respiratory infection has been and continues to be a serious military problem.

Reports of Group A hemolytic streptococcus epidemics among military populations are now appearing in the medical literature. Not only have there been large numbers of cases, but also the frequency of associated rheumatic fever makes this problem one of great importance to the services,

especially in the training of military personnel. The latter causes long periods of illness, and those who are so afflicted must either be discharged from the services or run the danger of repetitive or recurrent disease.

It is natural that the armed services have developed prevention programs for the curtailment of hemolytic streptococcus infections and rheumatic fever. The reports to date largely concern the administration of small daily doses of sulfadiazine to large numbers of personnel. Holbrook,[1] Coburn[2] and Keith[3] have recently reported such studies. These papers offer interesting material and data that require much thought and even philosophical speculation. All three authors agree that such sulfonamide prophylaxis sharply decreased the volume of streptococcal disease in the respective populations. In one instance it was indicated that the incidence of rheumatic fever was reduced, parallel to that of streptococcal diseases, and in another this mass prophylaxis was reported as effective in preventing the development of disabling sequelae caused by these bacteria.

A further report on sulfonamide prophylaxis in the armed forces appears elsewhere in this issue of the *Journal*. In keeping with the previous reports, Dr. Hodges reports a diminution of bacterial disease, especially streptococcal infections, as well as rheumatic fever, in the treated groups. Attention should be particularly directed to one of the figures of his report, which shows a continued rise in the streptococcal infections in the control group coincident with a sharp fall in these infections in the treated group. This appears to be the most convincing information yet published.

These reports are of broad significance and importance. The data as yet available, however, do not permit accurate appraisal of the results. Variations in susceptibility, length of military experience, the composition of individual units, the length of service in a given station, housing and so forth make such disease-control measures a complex problem, the evaluation of which is fraught with difficulty. There can be little doubt that more than suggestive evidence of the immediate success of sulfonamide prophylaxis is presented. Eventual analyses with more detailed information may indicate that factors other than the drug prophylaxis were at least partially responsible for the results obtained.

A recent editorial in the *Journal* discussed the dangers of continuous sulfonamide therapy.[4] The development of sensitization to the sulfonamides and the creation of drug-resistant strains of bacteria were stressed as possible deterrents in this type of prophylactic control. Several new developments suggest the pertinence of these previous remarks, and it seems advisable to re-emphasize some of the possible and inherent dangers of such mass prevention studies.

Little can be added concerning the development of sensitivity or toxic reactions to the drug. Reports continue to indicate that such cases are rare. The report of French and Weller,[5] however, needs emphasis. Fatalities as the result of myocardial changes following therapeutic doses of sulfonamides are apparently increasing, and one can only wonder what will develop in young men who have received small prophylactic doses of sulfonamides when they are given large therapeutic doses at a later period. The future alone will give the complete picture.

The question of drug-resistant strains seems more immediately pertinent. Hendry[6] has demonstrated the development of drug-resistance by a Group A hemolytic streptococcus. Since virulence or pathogenicity seems unrelated to drug-fastness, the possibility of the development of epidemics with drug-fast strains seems entirely tenable. Indeed, Wright, Cruickshank and Gunn[7] have reported their inability to control the spread of a drug-resistant Group A (Type 6) hemolytic streptococcus in a measles ward by sulfonamide prophylaxis. The ease with which strains may become drug-resistant remains to be determined, as well as many other puzzling features. It seems not unlikely that the widespread therapeutic and prophylactic use of sulfonamides will eventually produce many resistant strains and that penicillin will prove to be as necessary in these as in gonococcal infections.

Another feature of such prevention programs remains unexplored. Little is known concerning what role long-continued sulfonamide prophylaxis plays in the development of antistreptococcus immunity. It is possible that protection at one time results in a continuation of susceptibility and the develop-

ment of appreciable patterns of illness on later exposure to infection. Some information concerning this may be available in the future.

Military necessity will, of course, dictate the continuation of sulfonamide prophylaxis. Even in such populations the alleviation of an immediate problem may ultimately prove to effect adversely the future health of service personnel. So far as civilian populations are concerned, there seems little justification for the wholesale and uncontrolled use of long-continued sulfonamides, save on a purely experimental basis, with a carefully thought-out and controlled study. Furthermore, attention should be directed to other measures for the control of streptococcal infections that are not accompanied by the dangers and difficulties mentioned above. Dust control (by the oiling of floors and bedclothes), sterilization of the air by ultraviolet irradiation and the use of aerosols, ventilation, improved methods of housing and so forth may be mentioned as procedures of probable benefit.

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MASSACHUSETTS MEDICAL SOCIETY

DEATHS

BARONE — Anthony Barone, M.D., of Boston, died December 8. He was in his forty-ninth year.

Dr. Barone received his degree from the Middlesex University School of Medicine, Waltham, in 1921. He was also a dentist and registered pharmacist. He was a member of the American Medical Association and the Massachusetts Dental Society.

His widow, four daughters, five brothers and two sisters survive.

GODDARD — Frederick C. Goddard, M.D., of Uxbridge, died November 7. He was in his fifty-second year.

Dr. Goddard received his degree from Tufts College Medical School in 1917. He enlisted in the army immediately following his internship at St. Elizabeth's Hospital. For the past twelve years he has been a member of the visiting staff of Milford Hospital. He was a member of the American Medical Association and a past president of Thurber Medical Association.

His widow, two sons and a daughter survive.

KELEHER — William H. Keleher, M.D., of Woburn, died December 4. He was in his seventy-sixth year.

Dr. Keleher received his degree from Harvard Medical School in 1892. He was a director of Choate Memorial Hospital and a former medical examiner of the Fourth Middlesex District. He was a member of the American Medical Association, and was president of the Middlesex East District Medical Society in 1913.

His widow, four sons, a daughter and a sister survive.

LEHNHERR — Earl R. Lehnherr, M.D., of Brookline, died December 4. He was in his forty-second year.

Dr. Lehnherr received his degree from Harvard Medical School in 1931. He was a staff member at the New England Deaconess Hospital and the Palmer Memorial Hospital and was associated with the Allergy Clinic of the Massachusetts General Hospital. He was a member of the American Medical Association.

His widow and a son survive.

PERKINS — Roy S. Perkins, M.D., of Lowell, died December 3. He was in his fifty-fifth year.

Dr. Perkins received his degree from Bowdoin Medical School, Brunswick, Portland, in 1914. After practicing for two years in Lowell, he entered army service in 1917 and served overseas for 14 months as a captain in the Medical Corps. He conducted an x-ray laboratory in Boston and served as radiologist at St. John's and St. Joseph's hospitals in Lowell, at the Peabody and Salem hospitals and at the Massachusetts State Hospital in Tewksbury. He was president of the staff of St. John's Hospital and a past president of the staff of St. Joseph's. He was a fellow of the American X-ray Society and a member of the American Medical Association.

His widow, a sister and a brother survive.

SCARITO — Nicholas J. Scarito, M.D., of Lawrence, died December 3. He was in his sixty-sixth year.

Dr. Scarito received his degree from George Washington University School of Medicine in 1912. He was a member of the American Medical Association.

His widow, a son, a daughter, a grandchild and two brothers survive.

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

VISION TESTING IN MASSACHUSETTS SCHOOL CHILDREN

Eye tests for school children are a major concern of school health departments, particularly of the school physicians. Since poor eyesight is often remediable, no child should be permitted to struggle through school for lack of attention to a visual deficiency. An ophthalmologic examination for every school child would be ideal, but since practical considerations make such a program impossible, parents, nurses and teachers can be enlisted to serve as reconnaissance groups for discovering children with visual defects. The school seems to be the agency best suited for directing a large-scale reconnaissance project of this kind.

Although lay persons ordinarily should not be expected to make diagnoses or suggest treatment, most teachers and nurses can become highly skillful in administering subjective tests and obtaining reliable test responses. By careful observation for symptoms, supplemented by a comprehensive

screening test, the school staff is in a position to detect the majority of children needing the attention of the eye specialist.

Such a test is the new "Massachusetts vision test," already serving about a third of the towns in the Commonwealth. It was designed particularly with a view toward getting a better job done in the schools and to stimulate attention to the related problem of sight conservation. It is particularly notable for the precise instructions provided for those giving the test, as care and exactness are essential in order to get good results. Since persons with special interest and aptitude in giving such tests usually obtain superior results with less expenditure of time and effort than those who labor over such work without enthusiasm, it is suggested that persons with these special aptitudes be selected for performing the tests. Whether the tester be a teacher or a nurse, she should be chosen because she excels in the easy handling of children, has a quick grasp of essential details and uses good judgment in recording a child's responses.

This new test includes a Snellen chart employing the symbol E (with the middle prong the same length as the other two), which is considered superior to the numbers or letters commonly used on vision test cards. The card is to be read at a distance of 20 feet. Illumination is standardized by means of an electric bulb arranged to give an even distribution of approximately 15 foot candles over the surface of the chart. According to the Snellen formula, the "20 line" is the critical test. Failure to read this line correctly at the 20-foot distance is interpreted as a deviation from normal, and the child who cannot read this line with either eye is therefore referred for a retest. Failing this, he is then referred to the family specialist for examination. About 90 per cent of all children picked up by the school test are found by the simple use of this modified Snellen card.

Two other checks are included in the test: one for latent hypermetropia, which employs plus (+) spherical lenses in eyeglass frames, and the other, a check of muscle imbalance. The latter makes use of a multiple Maddox rod mounted for the right eye in a spectacle frame, with no lens for the left eye. The object of fixation is a small light arranged in a simple device for describing the degree of heterophoria. These two tests are so easy for a lay person to administer that only a minute or two is required for each child. There is some controversy over the practicability of these additional tests, because some ophthalmologists refuse to correct moderate degrees of hypermetropia in children and some decline to prescribe for muscle imbalance. Experience with large numbers of cases, however, presents evidence that correction, often temporary, is often highly beneficial, especially for children with records of poor school achievement.

The test is receiving high praise from specialists who are examining school children selected by the method. Of particular interest to some of them is the fact that certain children, hitherto not detected, yet suffering from eyestrain, are being discovered, particularly those with latent hypermetropia.

MISCELLANY

GRANTS BY THE BARUCH COMMITTEE ON PHYSICAL MEDICINE

The Administrative Board of the Baruch Committee on Physical Medicine has announced the granting of an additional total sum of $185,000, which is being given by Mr. Bernard M. Baruch for the further advancement of the program in physical medicine and the physical rehabilitation of those disabled in the war. This sum has been divided into seven grants as follows: $50,000 to the Massachusetts Institute of Technology; $40,000 to the University of Minnesota Medical School; $30,000 to the Harvard Medical School; $30,000 to the University of Southern California School of Medicine; $15,000 to the State University of Iowa College of Medicine; $15,000 to the University of Illinois College of Medicine; and $5000 to the Marquette University School of Medicine.

The grants to the Massachusetts Institute of Technology and the University of Minnesota are in addition to the gift of $1,100,000 made by Mr. Baruch in April, 1944, at which time grants were made to Columbia University College of Physicians and Surgeons, New York University College of Medicine, the Medical College of Virginia and for minor research and fellowship programs for the advancement of physical medicine.

The present gift to the Massachusetts Institute of Technology is in support of a five-year program of training and research in electronics, instrumentation and physics in relation to medicine, to be carried on under the auspices of the Department of Biology and Biological Engineering. It was the conviction of the Scientific Advisory Committee of the Baruch Committee on Physical Medicine that Baruch fellows and other physicians should have more than a superficial knowledge of the physics and technology underlying the physical methods and instrumentation used in this field, and it was suggested that training in this aspect might effectively be centered at the Massachusetts Institute of Technology. The program will be under the general supervision of Francis O. Schmitt, head of the Department of Biology and Biological Engineering and under immediate supervision of K. S. Lion, assistant professor of applied biophysics, who is an expert in physical instrumentation.

The other grants have been allocated from the fund of $200,000 given by Mr. Baruch in April. The sum of $30,000 was granted to Harvard Medical School for the establishment of a three-year program to provide fellowship or residencies to be used for the benefit of qualified physicians who are selected to be trained in this field. This sum will be administered by the Standing Committee on Physical Medicine, recently appointed by Dean C. Sidney Burwell of Harvard Medical School, composed of Drs. J. B. Ayer, D. Denny-Brown, W. T. Green, J. H. Means, A. L. Watkins and E. M. Landis (chairman). Appointments to the fellowships, which generally carry stipends of $2500 or $3000, will be made annually but may be renewed to provide up to three years of specialized study and research. Emphasis will be placed on training a few men in basic research and clinical investigation.

Unusual opportunities for clinical experience and research in the psychologic and psychiatric aspects of physical medicine will be available at Harvard. The first year will be wholly or in part devoted to basic research related to physical medicine in one of the preclinical sciences, such as physiology, anatomy or biophysics. The second year will be spent in clinical training in physical medicine at the Massachusetts General Hospital and other hospitals affiliated with the Harvard Medical School. In the third year, fellows will be

assistants in physical medicine with clinical responsibilities. For candidates with extensive previous training, one-year clinical fellowships will also be granted. Applicants must have an M.D. degree from an approved medical school and a minimum of one year of internship in an approved hospital.

PULMONARY TUBERCULOSIS AS INFLUENCED BY WARTIME RELOCATION

The danger that an unsuspected case of tuberculosis will infect others is present wherever human beings live in close contact. Whether it be in families, in schools, in offices, or under such artificial conditions as were produced by the evacuation of children from the danger areas in England is not important — the significant factor is always the case which is not recognized until too late to prevent spread of the disease. Too often children are overlooked in the search for contacts when a case of tuberculosis is discovered. The following abstract from a recent paper (Hall, M. Pulmonary tuberculosis in children: influence of evacuation on its incidence. *Lancet* **2**:35-37, 1943) discusses the problem.

* * *

An increase in tuberculosis in England following the outbreak of the war seemed to justify collection and examination of the results of work among tuberculous children in East Sussex in relation to the spread of the disease traceable to evacuation and billeting.

Little work has been done in England on locating the source of tuberculosis observed among children. Reports from Scandinavian and American investigators show that wherever the background of these children is carefully studied, large numbers of unsuspected spreaders of bacilli can be detected among their contacts, since infection quickly registers among children exposed to open cases of tuberculosis. This has been demonstrated by our experience with evacuated children.

History, physical examination, tuberculin skin tests, blood sedimentation rates and chest x-ray films were recorded in all cases. Gastric lavage was done on cases admitted to the hospital.

Cases showing the effect of billeting healthy children with others who have open tuberculosis are as follows:

CASE 1. A girl twelve years old was admitted to the hospital with a diagnosis of rheumatism. She was found to have a cough of several months' duration but previous examinations made in London had proved negative for tuberculosis. Therefore, the tuberculosis office of the reception area had not been notified. Cavities were found at both apices. This was confirmed by x-ray. The blood sedimentation rate was 21 mm., later being 50 mm.; the sputum was loaded with tubercle bacilli.

School contacts. Four children out of 15 were found to be infected with tuberculosis. Two others showed suspicious x-ray findings. All children were re-examined at three-month intervals until calcification developed in the primary foci and mediastinal nodes.

Billet contacts. A girl six years old was infected by Case 1, who was billeted with the parents of Case 2 for six months, during which time the child developed a cough. She had a pleural effusion in the right base, demonstrated by x-ray. The primary complex appeared as this cleared. The child made a good recovery, with healed calcified lesions in the right lung appearing later.

Another contact was an eight-year-old girl who was admitted to the hospital complaining of abdominal pain. She gradually developed tuberculous meningitis and died after three weeks. X-ray films showed miliary tuberculosis. She spent a month with Case 1 at a holiday camp, sharing a bed with her at this time.

CASE 2. A boy eleven years old was sent to the local practitioner because he looked thin. The doctor found suspicious signs in his chest and sent him to the hospital. The school medical officer had examined this boy with special attention because his mother had died of tuberculosis but did not x-ray his chest. No note had been sent to the tuberculosis officer of the reception area. There were cavities at both apices, confirmed by physical signs. Gastric lavage showed many tubercle bacilli. In addition to the boy's mother, a brother and a sister in the same family died with tuberculosis and the child himself had attended a tuberculosis clinic.

School contacts. In all, 40 children and their teacher were examined; 11 of them were found to have been infected with tuberculosis; 6 of these showed definite activity, 4 had healing lesions and 1 had a calcified lesion.

Billet contacts. Case 2 was billeted with 5 other children, 3 of whom became infected with tuberculosis. One child in this group had sanatorium treatment.

The effect of billeting healthy children in households in which there is or has been tuberculosis is no less serious, as is illustrated by the case of a child of five who entered the hospital with phlyctenular conjunctivitis and was found to be infected with tuberculosis. She was one of six brothers and sisters, all previously healthy, who were placed with a foster-mother known to have had tuberculosis eight years previously. This woman had a bad cough while the children were living with her but refused examination. Four of the six children were found to have tuberculosis.

Neglecting the examination of child contacts may also have disastrous results, as is shown by the following case:

CASE 3. A girl six years old died in the hospital of miliary tuberculosis. The child was infected by her aunt, a young adult who had entered a sanatorium some months before. The child had often visited her but had not been examined, and the tuberculosis officer in the reception area had not been notified.

School contacts. Case 3 attended an evacuation school and all the children, 39 in number, and 3 teachers were examined. Eight children had evidence of recent tuberculous infection.

Two of the children examined with this school were also found to have tuberculosis. The infection in the case of these two was traced to their mother, who had died from tuberculosis four months earlier. After the death of the mother one child had been examined clinically but no x-ray films were taken.

Billet contacts. A brother and a cousin, the latter of whom died of tuberculous meningitis, were found to be infected. Another brother remained healthy.

In reviewing these cases one is impressed by the importance of the search for child contacts and the little attention usually paid to them. So great is the risk of bacillary transmission that all children who have been in close or repeated contact with a case of reinfection pulmonary tuberculosis should be regarded as having become infected until it is proved otherwise.

To be domiciled with a case of open phthisis is relatively much more dangerous than to attend the same school with a case. Physical examination that deals with the exterior of the chest alone is worthless in children and may be dangerous, as an infected child may be labeled as "normal." All child contacts should have complete examinations, including tuberculin tests and x-ray examinations.

Wherever children are placed in a new environment, great care should be taken to establish that they are not suffering from tuberculosis and that they are not thrown unwittingly into contact with it. Certainly, a more intensive search must be made for all child contacts of open cases of tuberculosis. — Reprinted, with changes, from *Tuberculosis Abstracts* (December, 1944).

ELLA SACHS PLOTZ FOUNDATION

During the twenty-first year of the Ella Sachs Plotz Foundation for the Advancement of Scientific Investigation, twenty-seven applications for grants were received by the trustees, nineteen of which came from the United States, the other eight coming from five different countries in Europe, Asia and South America.

In the twenty-one years of its existence the Foundation has made five hundred and eight grants which have been distributed to scientists throughout the world.

In their first statement regarding the purposes for which the fund would be used, the trustees expressed themselves as follows:

> For the present, researches will be favored that are directed toward the solution of problems in medicine and surgery or in branches of science bearing on medicine and surgery.

As a rule, preference will be given to researches on a single problem or on closely allied problems; it is hoped that investigators in this and in other countries may be found, whose work on similar or related problems may be assisted so that more rapid progress may be made possible.

Grants may be used for the purchase of apparatus and supplies that are needed for special investigations, and for the payment of unusual expenses incident to such investigations, including technical assistance, but not for providing apparatus or materials which are ordinarily a part of laboratory equipment. Stipends for the support of investigators will be granted only under exceptional circumstances.

In the past few years the policy outlined in the second paragraph has been neglected and grants will be given in the sciences closely related to medicine without reference to special fields. The maximum size of grants will usually be less than $500.

Applications for grants to be held during the year 1945-1946 must be in the hands of the Executive Committee before April, 1945. There are no formal application blanks, but letters asking for aid must state definitely the qualifications of the investigator, an accurate description of the research, the size of the grant requested and the specific use of the money to be expended. In their requests for aid, applicants should state whether or not they have approached other foundations for financial assistance. It is highly desirable to include letters of recommendation from the directors of the departments in which the work is to be done. Only applications complying with the above conditions will be considered.

Applications should be sent to Dr. Joseph C. Aub, Massachusetts General Hospital, Fruit Street, Boston 14.

CORRESPONDENCE

FUTURE OF MEDICINE

To the Editor: The article "Justice and the Future of Medicine" by Wendell Berge, published in the November 30 issue of the *Journal*, is a thought-provoking presentation of the problem of social medicine that should be read and pondered by every doctor.

Good health is both an individual and a community asset. The prosperity of a community may, with reason, be said to depend on its health.

Medical knowledge regarding preventive, diagnostic and curative procedures has ranged far ahead of the application of this knowledge. With the improvement of medical procedures the cost has increased.

Within limits, both private and public health can be purchased, provided the cost of applying known medical measures can be met. Medical economics is the study of how to obtain the best medical care and protection for the greatest number of people at the lowest possible cost and in the most satisfactory manner. In spite of the great accomplishments of medicine it cannot be denied that the people want something more.

Mr. Berge suggests: "If an instrument of common health can be provided on terms the people can afford the people will rejoice. If you do not help them to it the people will seize whatever agencies are at hand as a help in need. For the universal demand that the common health be served cannot much longer be delayed."

If there is a lesson to be learned from Mr. Berge's article, — and I think there is, — it is that doctors should play a leading part in shaping this "instrument of health" and in the development of all medical measures; they should not only insist on the provision of the highest quality of medical care but also guide in other ways. Scientific advancement is always needed, but practical and universal application of these advances are equally important.

A sound health program must be founded on sound basic principles and policies. As a constructive addition to the study of this vital problem of medical economics, I enclose a summary of "Principles of a Nation-Wide Health Program," which is a detailed report prepared by the Health Program Conference. Every doctor should read the full report carefully and without prejudice and then consider what he, personally, should do about it.

NATHANIEL W. FAXON, M.D.
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Boston 14

* * *

PRINCIPLES OF A NATION-WIDE HEALTH PROGRAM*

This program and these principles are the joint product of twenty-nine men and women of differing interests: thirteen physicians, some in private practice and others in universities, health agencies and hospital administration; six economists, a majority of whom have long studied and worked for health insurance; the research directors of the American Federation of Labor and the Congress of Industrial Organizations; and eight administrators connected with voluntary or governmental agencies. The problems of dentistry, nursing and pharmacy have not thus far been considered.

Under the program that the Conference proposes, the medical services would be comprehensive. Plans of medical care of a community that are limited to hospitalization, surgery or "catastrophic illness" are helpful and should be encouraged, but they cover only a part of the medical needs. Plans that provide only cash payments to meet the cost of services, in whole or part, are not desirable because such cash payments may be used for other purposes. Only comprehensive preventive, diagnostic and curative service will minimize disability, inefficiency and premature death, which bring heavy losses not only to individuals but to productive industry and agriculture.

The program should cover all or most of the population. In the opinion of the Conference, limitation of coverage to certain income groups or to those engaged in certain occupations would not be satisfactory. Those who wish to purchase medical care outside of the national health system should be free to do so.

In order that comprehensive service shall be available to all or most of the population and in order to minimize the administrative costs of acquiring members, it is essential that financial participation in the system be compulsory, provided that, as we have said, those who wish to purchase comparable medical care outside of and in place of a national health system should be free to do so. American families ordinarily spend directly about 4 per cent of their earnings for all kinds of medical services. Of this, the expenditures for physicians and for hospital services constitute about three fourths, that is, about 3 per cent of the annual income. The American people are now spending for physicians' services and hospitalization enough to make it possible to provide adequate medical care for all, with only minor supplementation.

The insurance principle applied to medical expenditures will mean no greater expenditure of money but should result in better medical care, regularizing existing payments rather than imposing new burdens. The expense of physicians' and hospital services would be met by a national system of contributory health insurance, supplemented by taxation. We recognize that there must be a certain amount of federal direction, but administration must be decentralized on a state basis, recognizing voluntary as well as governmental agencies. The quality of care and the status of the medical profession should be fostered by improved professional organization of service, by retaining the freedom-of-choice principle, and by adequate compensation and educational opportunities.

The amounts of payment from employees and self-employed persons should be related to the earnings of the contributors. It is generally considered that it is desirable that employers should also contribute. Because of the inadequate provision of hospitals and other medical facilities in some parts of the country, particularly in rural areas, capital funds for such facilities are necessary "which, insofar as unavailable from nongovernmental sources, should be provided by federal, state or local taxation, or combinations of these."

The national health program should include general tax funds from the start, especially to aid in the construction

*A summary of a report published for the Health Program Conference by the Committee on Research in Medical Economics, 1790 Broadway, New York 19, New York.

and operation of new or improved hospitals or health centers, particularly in rural areas, in the further extension of full-time public-health departments, in the application of preventive measures made available in every part of the country and in the provision or improvement of medical services to those dependent on and other persons not directly covered by the insurance system.

The report is not a draft of legislation. It sets forth policies and principles, including those of organization, and does not specify the governmental agencies to be involved. Participation between the profession and the public is emphasized throughout. The people cannot obtain a high quality of service unless adequate training, intellectual freedom and economic security are assured to physicians.

The national policy-determining body for the administration of a health program must be composed of representatives of the chief groups of those who receive service and of those who furnish it. Similar policy-determining bodies should be organized at local and intermediate levels. All policy-determining bodies should be responsible to the interest of the general public, as distinguished from the interest of any vocational or economic group.

The administrative officers working under such public bodies should be removed as fully as possible from partisan political pressures and should fall into two operating groups: professional and financial. The strictly medical activities should be under qualified members of the profession. Financial responsibilities should be placed under the control of a financial group. Both the professional and financial officials, each having administrative authority in their respective fields, would be co-ordinated through the policy-determining body. Thus, when the decisions had to do with medical considerations only, they would be made by the medical administrators aided by advisory councils of physicians. When decisions related to general policies they would be made by a joint group representing both the profession and the public. These principles would apply to each local area, as well as on national and intermediate levels.

The administration of services should be decentralized, with "responsible participation of local physicians and agencies (governmental and voluntary) in the administration and control of their health services under national standards; the funds and administrative agencies of local subdivisions and of the states might well be utilized in planning and in the provision of services." The local organization "should be the administrative unit and the foundation of the national system."

Voluntary hospitals with their extensive facilities would continue under the system, maintaining their autonomy; and voluntary health-insurance plans would also be recognized. "Voluntary agencies providing services of acceptable standard should have the right to participate in the system. Voluntary agencies not providing services should have the right to participate if they contribute to the efficiency and economy of the system. Under these principles, voluntary agencies which directly provide physicians' services or hospitalization of acceptable standards would be eligible to participate in the system, but agencies would not necessarily be included when they were concerned only with the collection of funds and the distribution of cash indemnities to beneficiaries."

In order to maintain and improve the quality of service, the career of a physician must offer stimulating professional opportunities and adequate financial compensation. There must be ample support for medical education and research; freedom of experimentation in medical science, medical technology and in the different types of medical practice. Group medical practice is to be encouraged. The organized staffs of the best hospitals and clinics now constitute the most widely diffused examples of group medical practice. Unfortunately, the advantages of group practice in these hospitals are at present not universally achieved for all classes of patients, often being limited to those in the low income brackets, the so-called "ward patients." Hospitals and clinics should be reorganized, as some of them have already been, so that comprehensive service through group medical practice will become available to people of all incomes. As medical centers, it is possible that hospitals may ultimately provide preventive, diagnostic and therapeutic services for bed, ambulatory and home patients, and also office facilities for the physicians on their staffs.

In the full report, certain principles regarding the payment of physicians are stated. "Compensation should be adequate." The other principles relate to judging adequacy of income and to fixing the best method of payment under various circumstances. Fee-for-service payment has been the long-accepted method of payment in spite of certain disadvantages. Alternative principles stated in the report would permit fees for service, but "would tend to encourage the compensation of general practitioners by the capitation or the salary method."

How would the method of payment be decided? In each local area the general practitioners carrying on private practice would determine by majority vote the method of payment that they preferred, but "those physicians who wished to carry on group instead of individual practice in the same area, and to be remunerated accordingly, would also be protected in their right to do so."* Specialists, qualified under standards set by professional bodies, would be paid on a fee or a salary basis according to local arrangement. The incomes of hospitals under a nation-wide health program would be mainly derived from services rendered to beneficiaries of the program. Consequently, payments from the health-insurance fund to the hospitals must be adequate to support high-quality service. Here and elsewhere, the full report develops many of the items in more detail.

The basic "principles of freedom" for the people and for physicians must be assured. People "should be entitled to choice among individual physicians, organized groups of physicians, hospitals, clinics and any other agents, agencies or service recognized under the law; and also to change their sources of service when they so desire, under reasonable regulations." Physicians, on their part, should have "the right to accept or reject patients; the right to participate or not to participate in a publicly established system; the right to be represented in negotiations through organizations of their own choosing; and the right to furnish services as individuals, or to organize medical groups, or to associate themselves with existing medical groups or hospitals which will accept them."

The program based on these and the preceding principles was developed by the Conference in "the belief that there is now need for public action to make adequate medical care more widely accessible to the American people and to improve the quality, organization and economy of medical services."

BOOK REVIEWS

To the Editor: Is there something wrong with the Book Review Section of the *Journal*? We admit this is rather a bold question but nevertheless a serious one.

At the beginning of 1943 a book *The Inner Ear* by Joseph Fischer and Louis E. Wolfson was sent to many leading medical journals, including the *New England Journal of Medicine*, *Journal of the American Medical Association*, *Archives of Otolaryngology*, *Annals of Otology*, *Laryngoscope*, *War Medicine*, *Lancet* and so forth. Without exception the reviews were highly favorable, and the general trend of comment was that the book filled a long-felt want. All the journals, with the exception of the *New England Journal of Medicine*, published their reviews of this book promptly and more than one year ago. The book review in the *New England Journal of Medicine* was published in the October 12, 1944, issue, *more than one year after all the other reviews had appeared*. This review commented only on the first two chapters and was most unfavorable. The statement was also made that in the coming second edition (about which the authors have no knowledge) the reviewer expected improvement.

We believe that the editors of the Book Review Section of the *Journal* could well re-read, with profit, the letter of Dr. Frank H. Lahey in the *Journal* of November 4, 1943, in which he particularly emphasized the desirability that the reviewer be a qualified critic and that his criticism should not be colored by personal prejudice. The letter of Dr. Henry A. Christian in the *Journal* of March 2, 1944, is also pertinent in that he gives some very good reasons in favor of signed book reviews.

*Further study should be given to a supplementary method of payment for the minority other than that determined by the majority.

Surely there must be something wrong when the *New England Journal of Medicine* reviews a book more than a year after all the other medical journals mentioned above, all of them having received the book at the same time. The complete lack of agreement of the *Journal's* review with those of the other periodicals can of course not be commented upon, but it raises questions as to the correctness of the reviewer's opinions as expressed in the *New England Journal of Medicine.*

LOUIS E. WOLFSON
JOSEPH FISCHER

BOOK REVIEWS

Medical Diagnosis: Applied physical diagnosis. Edited by Roscoe L. Pullen, M.D. With a foreword by John H. Musser, M.D. 8°, cloth, 1106 pp., with 584 illustrations and 12 colored plates. Philadelphia and London: W. B. Saunders Company, 1944. $10.00.

This book is intended to develop the ability of the physician to examine all parts of the body. Specialists have contributed chapters outlining the procedure appropriate for examinations within their special provinces.

This plan is excellent for an encyclopedia but has certain disadvantages when the material is compressed into a single volume intended for use as a textbook. One is tempted to ask why, if one man is expected to master the contents of the text, should not one man write it, thereby demonstrating the possibility of a single person's mastering the field covered by the book. Again, as a textbook, it is too advanced for the second-year student, who has not yet been introduced to much of the subject matter, whereas more detailed information is preferable for advanced or graduate students. Probably a physician or student is best equipped when he has mastered the fundamentals of simple physical diagnosis and then uses special manuals of electrocardiography, ophthalmology, gynecology, dermatology and so on for assistance in special fields.

Nevertheless, the work is as well done as one can reasonably demand, and its value is likely to be determined by the extent to which it is chosen by instructors and students.

Principles and Practices of Inhalational Therapy. By Alvan L. Barach, M.D. 8°, cloth, 315 pp., with 59 illustrations. Philadelphia: J. B. Lippincott Company, 1944. $4.00.

This is an unusual book in that it represents in the main the studies of the author over a period of twenty-four years on the therapeutic use of gases in clinical medicine, comprising the results of over a hundred papers. It will be remembered that in 1925 Dr. Barach developed an oxygen tent ventilated by the passage of air over ice, which first provided a hygienic atmosphere in respect to temperature and humidity, as well as an effective concentration of oxygen. He introduced helium as a therapeutic gas in the treatment of asthma and obstructive dyspnea and, with the aid of skilled technical assistants, developed chambers, hoods and masks for the administration of oxygen and of helium and oxygen mixtures. His use of positive pressure in the treatment of obstructive dyspnea and pulmonary edema brought a new therapeutic procedure to clinical medicine. Of great interest is his method of immobilizing both lungs through equalizing the air pressure on the inner and outer surface of the chest wall; this equalizing pressure chamber has been employed on patients with advanced pulmonary tuberculosis with promising results.

A good description of the contributions of other workers in this field is included, together with an extensive bibliography.

The book describes in clear detail the use of oxygen, helium, carbon dioxide, positive pressure, continuous pulmonary arrest and vaporized solutions of epinephrine, Neo-Synephrin and sulfonamides as therapeutic agents for maintaining respiratory function. It is well illustrated with photographs of apparatus and with charts confirming the physiologic usefulness of various types of inhalational therapy.

Each chapter heading represents a disease entity, for example, pneumonia, pulmonary edema, bronchial asthma, shock, acute altitude sickness and so forth, and contains a discussion of the pathologic physiology, the specific inhalational therapy and the results to be expected. The chapters covering bronchial asthma, congestive heart failure, pulmonary emphysema and chronic pulmonary tuberculosis are beautifully written and replete with the special disturbances in respiratory function involved and their management. Those interested in aviation medicine will find the chapter on acute altitude sickness, including many of the author's own observations, one of the best ever written on this timely subject.

This is the first complete textbook of its kind. The physician who wishes to understand the physiologic basis and technic of inhalational therapy will find it indispensable. To the student and research worker in the field it will serve as a bible, as well as a source of stimulation in the study of this fascinating, relatively new approach of therapy via the pulmonary route.

NOTICES

ANNOUNCEMENT

Dr. Oscar J. Marcil announces the removal of his office from East Jaffrey, New Hampshire, to 66 Parker Street, Gardner, Massachusetts.

BARUCH FELLOWSHIPS IN PHYSICAL MEDICINE

The Harvard Medical School announces fellowships in physical medicine supported by grants from the Baruch Committee on Physical Medicine. The purpose of these fellowships is to provide a three-year training for academic and clinical careers in the field of physical medicine. They are granted annually but subject to renewal for a total duration of three years. The first year will be wholly or in part devoted to basic research related to physical medicine in one of the preclinical sciences, such as physiology, anatomy or biophysics. The second year will be spent in clinical training in physical medicine at the Massachusetts General Hospital and other hospitals affiliated with the Harvard Medical School. In the third year fellows will be assistants in physical medicine with clinical responsibilities. For candidates with extensive previous training, one-year clinical fellowships will also be granted.

Applicants must have an M.D. degree from an approved medical school and a minimum of one year of internship in an approved hospital. The annual stipend will be $2500 (single) or $3000 (married). Applications may be obtained from the Dean, Harvard Medical School, 25 Shattuck Street, Boston 15, Massachusetts.

JOSEPH H. PRATT DIAGNOSTIC HOSPITAL

Bennet Street, Boston
Lecture Hall, 9–10 a.m.

MEDICAL CONFERENCE PROGRAM

Wednesday, January 3 — Surgical Difficulties in Ulcerative Colitis. Dr. Francis Moore.
Friday, January 5 — Cancer of the Cervix. Dr. B. Lorincz.
Wednesday, January 10 — The Incidence of Psychoneurosis in the Medical Clinic. Dr. Joseph Kaplan.
Friday, January 12 — Cancer of the Pancreas and Ampulla Relative to Diagnosis and Resection. Dr. Richard B. Cattell.
Wednesday, January 17 — Breast Cancer: Problems of diagnosis and treatment. Dr. Joseph Tartakoff.
Friday, January 19 — The History and Physical Examination of the Gynecological Patient. Dr. Louis E. Phaneuf.
Wednesday, January 24 — Studies of Finger Capillaries in Neuroses, Epilepsy, and Migraine. Dr. Alfred Hauptmann.
Friday, January 26 — The Treatment of Thyrotoxicosis with Anti-thyroid Drugs. Dr. R. Williams.
Wednesday, January 31 — A Recent Advance in Dermatological Therapy. Dr. Francis M. Thurmon.

On Monday mornings clinics will be given by Dr. Samuel Proger. On Tuesday and Thursday mornings Dr. S. J. Thannhauser will give medical clinics on hospital cases. On Saturday mornings clinics will be given by Dr. William Dameshek.

(*Notices continued on page xv*)